REQUEST FOR ADDING, CHANGING, OR DROPPING AN UNDERGRADUATE CURRICULUM

Department: Electrical and Computer Engineering
College: Engineering
Name of Curriculum/Major: Electrical Engineering
Type of Degree: BS
Date: 8/21/12

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: Show present catalog description which is to be changed (left column) and the changes proposed (right column) on a separate sheet of paper. 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:</td>
<td>127</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date: 8/21/12
Department Chair's Signature: 8/21/12

College Faculty Approval Date: 9/17/12
College Dean's Signature: 9/20/12

Chair, FS C & C Committee: 10/2/2012
Academic Affairs Approval: 10/8/2012
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 which 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.

<table>
<thead>
<tr>
<th>General Education Requirement</th>
<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Year</th>
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<td>EE design electives</td>
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<td>Approved technical electives</td>
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Approved Breadth Electives: Students must choose at least
18 hours of Breadth Electives. At least 9 hours must be from
courses marked with *. Breadth Electives include:

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EE 3160*</td>
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<td>EE 3410*</td>
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<td>EE 3220*</td>
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<td>EE 3530*</td>
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<td>EE 3221 (2)</td>
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<td>EE 3552*</td>
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<td>EE 3232</td>
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<td>EE 3755</td>
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Approved Breadth Electives:

<table>
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<th>Course</th>
<th>Credits</th>
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<tr>
<td>EE 3160*</td>
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<td>EE 3410*</td>
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<td>EE 3220*</td>
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<td>EE 3530*</td>
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<td>EE 3221 (2)</td>
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<td>EE 3552*</td>
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<td>EE 3232</td>
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<td>EE 3755</td>
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</table>
Summary of Electrical Engineering (EE) curricula changes

I) Form D for EE – we revised the curriculum as a result of feedback from faculty and students over the last few years to improve retention and matriculation rates. We also reviewed programs around the southeast including Georgia Tech, North Carolina State, Auburn, Mississippi State and Virginia Tech. Items (a) through (e) are identical for the computer engineering (EE) curriculum.

a. Adding EE 1810, an introduction to electrical and computer engineering. Many universities are adding this course to expose students as early as possible to their major and careers.

b. Adding EE 2810, a course that introduces students to computer tools used in electrical and computer engineering courses and careers.

c. Combining EE 3750 (2 credit lecture) and EE 3751 (a 2 credit lab course that follows 3750) into one 3 three credit class that has 2 hours of lecture and 2 hours of lab. EE 3752

d. Merging two sequential 2 credit classes (EE 2720-2730) into 1 new three credit class EE 2740. Many other programs offer digital logic this way.

e. PHIL 2020 is now the only course students can take to meet the ethics requirement. Since this course is an approved humanities elective, it will count as one of the three required humanities electives.

** The items below are unique to the EE curriculum

f. Dropping CSC 1254 as a requirement. Comparable EE programs only require one programming course in C++. Supporting email from CSC attached to FORM D.

g. Giving EE students the flexibility of choosing their junior level EE courses from a list of approved Breadth Electives. Currently there are 8 breadth elective courses and students would have to choose 6. Of these eight courses, four of them are currently required and the other three can be taken as electives. However there is only room in the senior year to take them. Now students will be able to take junior level courses in the junior year and have more opportunities to take senior level courses in the senior year. This is similar to the approach Georgia Tech and other schools use to help students take a breadth of courses and then in the senior take more “depth” type or specialized courses.

*EE 3150 replaces EE 3140 in the Junior Year. EE 3140 was dropped due to ten year inactivity. However, it is a required course in both Electrical & Computer Engineering curricula. This proposed course will have a greater connection with electrical and computer engineering applications and will better satisfy requirements of ABET and of follow up courses.
II) Form A - Courses added

   EE 1810(2) - Intro to ECE is required for both EE and EEC
   EE 2810(2) - ECE tools course is required for both EE and EEC
   EE 2740(3) - replaces EE 2720 and 2730 and is required for both EE and EEC
   EE 3752(3) - replaces EE 3750 and 3751 and is a breadth elective for EE
   EE 3150(3) - replaces EE 3140, dropped due to 10 yr. inactivity.

III) Form B - Courses deleted

   EE 2720 (2), 2730 (2), EE 3750(2), 3751(2)

IV) Form C - course changes resulting from (II) and (III)

   EE 2120 - 1810 prerequisite added
   EE 2731, 3755, 4242, 4720, 4740 - 2740 prerequisite added, 2730 removed
   EE 3160, 3530, 3610, 4745, 4780 - 2810 prerequisite added
   EE 4770, 4785, 7710 - 3752 prerequisite added, 3750 removed
   EE 4810 - 3752 prerequisite added, 3750 removed and Breadth electives now required

V) Form F - minor change as a result of (II) and (III)
This packet was generated in response to the following email:

Dr. Scalzo,

I have reviewed the EEC and EE proposals. Most of it was quite nicely done. I have combined the two packets by redoing the EEC and EE curricula to add the 3150 change. I have also changed the flowchart to show 3150 instead of 3140 and added verbiage to the justifications stating the reasoning for the addition of 3150, which is to replace 3140 due to ten year inactivity.

However, there are a few issues I believe the committee will address. If you can get these into me before Friday morning, we have a better chance of an approval outright. Also, I would advise coming to the meeting for Committee questions or concerns. This also gives a higher chance of approval if the committee can get answers at the meeting. The next meeting is October 2nd from 2:15-4:15 in 129 Himes Hall.

1. Are the Breadth Electives the same for EE and EEC?
2. For the Computer Engineering Curriculum, the justification does not point out why EE 3220 and 3221 were dropped from the curriculum. I assume it is because they have been moved to the breadth electives. But the Committee will want to know that.
3. Same for Electrical Engineering but also add reasoning for dropping EE 3410 and 3530.
4. I do not see the Computer Science paperwork. They said in March of this year that they had completed the paperwork. (I saw this in the email.) Please note that the proposals that are affected by CSC's ability to submit paperwork to me will cause them to be either conditionally approved or returned.
5. EE 4745- We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.
6. EE 3710- the justification needs to explain the choice of prerequisites. The Committee will want to know why these courses complement the course.
7. EE 4755- explain choice of prerequisites.
8. EE 3752- need a letter of support from CSC to add CSC 1253 as a prerequisite. (I just need an email).
9. EE 2810- need a letter of support from CSC to add 1253 as a prerequisite.
10. EE 2740- need a letter of support from MATH to add MATH 1550 as a prerequisite.
11. EE 1810- we will need a 14 week outline for the syllabus
Items 1,2 and 3 are addressed here related to Breadth Electives.

EE Breadth Electives

In keeping with some trends of some of the top electrical and computer programs around the country, the Division of ECE has given students some flexibility to choose from a list of junior level EE courses. The old curriculum required EE 3410, EE 3530, EE 3220, EE 3221, EE 3750 and EE 3751. Students then had only three technical electives to choose from EE 3232, EE 3160, EE 3755, and all of the EE 4xxx technical electives. Typically students only chose the 4000 level courses and just resigned the fact that there was not enough room in the curriculum for these other courses. The new EE curriculum allows students to choose six 3000 level EE breadth electives from a list of 8. Students are able to build a resume of classes they choose. The four 3000 level courses that appear to be dropped from the curriculum (EE 3410, EE 3530, EE 3220, EE 3221) were simply moved to the breadth elective list. Students will end up taking at least two of these classes and possibly all of them, depending on which 18 hours they choose from the list of breadth electives.

Here is the official wording for the EE Breadth Electives:

EE Breadth Electives - Students must choose at least 18 hours of Breadth Electives. At least 9 hours must be chosen from courses marked with *. Breadth Electives include: EE 3160*, 3220*, 3221, 3232, 3410*, 3530*, 3752, 3755

EEC Breadth Electives

The computer engineering degree is more specialized than electrical engineering degree by design. Advancements in the computer engineering profession require that students have courses in computer networking (EE 3710) and digital design using hardware description languages (EE 4755). These courses are more important to the computer engineering student than a second course in electronics (EE 3220) and a second course in electronics lab (EE 3221). The new EEC curriculum still has three labs at the 2000 and 3000 level, which is sufficient. EEC students can still take EE 3220 since it appears on the breadth elective list. However, if students are interested in digital media or controls etc., they can choose to take a different EE course at the junior level simply by choosing a different breadth elective.

Here is the official wording for the EEC Breadth Elective:

EEC Breadth Elective - Select one course from this list: EE 3160, 3220, 3320, 3410, 3530, 3610
TOTAL HOURS = 127

ELECTRICAL ENGINEERING

FALL
1
(3) CHEM 1201
Basic Chem.

2
(3) EE 2740
Digital Logic

3
(2) EE 2731
Dig. Log Lab

4
(3) MATH 2037
Calculus III

5
(3) EE 3510
Probability

6
(3) EE 3320
Elec. Fields

7
(3) EE 4810
Breadth

8
(3) EE Design

SPRING
(3) EE 3610
Breadth

FALL
1
(3) CHEM 1550
Calculus I

2
(3) CSC 1253
Intro CSC

3
(4) MATH 2090
DE & Lin Alg

4
(3) EE 2130
Circuits II

5
(3) EE 3610
Sig. and Sys

6
(3) EE Design

7
(3) Tech Elect

8
(3) Tech Elect

HOURS: 16
17
15
16
15
18
15
15
15
= 127

FLOWCHART LEGEND

Credit required

Credit or registration required

General Education -
See 2013-2014 General Catalog

EE Breadth: Students must choose at least 18 hours of Breadth Electives. At least 9 hours must be chosen from courses marked with *. Breadth Electives include: 3160*, 3220*, 3221(2), 3323, 3410*, 3530*, 3752*, 3755

A prerequisite to any electrical engineering course is met only by obtaining a "C" or better in each course cited as a pre-requisite.

In addition to EE 3610, the prerequisite is senior standing and one of 3160, 3220, 3410, 3530, or 3755.
TOTAL HOURS = 127

ELECTRICAL ENGINEERING

FALL 1
- (3) ART Gen Ed
- (2) EE 1810 Intro to ECE
- (6) MATH 1550 Calculus I
- (3) PHYS 1100 Intro to Phys
- (3) CHEM 1201 Basic Chem.
- (3) HUMN Gen Ed
- (3) ENGL 1001 Comp I

FALL 2
- (3) MATH 1552 Calculus II
- (4) PHYS 2101 Gen Phys I
- (3) PHYS 2108 Phys Lab
- (3) HUMN Gen Ed
- (3) HUMN Gen Ed

FALL 3
- (2) EE 2740(3)
- (2) EE 2720 Digital Logic
- (3) CSC 1253 Intro CSC
- (3) PHYS 2102 Gen Phys II
- (3) CSCI 1203 Gen Comp

FALL 4
- (2) EE 2730 Digital Logic
- (3) CSC 1254 Intro CSC II
- (3) PHYS 2110 Circuits I
- (3) CSCI 1204 Gen Comp II

FALL 5
- (2) EE 2731 Dig Log Lab
- (3) CSC 1254 Intro CSC II
- (3) EE 2130 Circuits II
- (2) EE 2230 Electronics
- (3) EE 2810 ECE Tools

FALL 6
- (2) EE 3762(3)
- (2) EE 3420 Micro Sys
- (2) EE 2230 Electronics
- (2) EE 2310 Elect. Lab I
- (3) EE 3510 Elec Power

FALL 7
- (2) EE 2120 Micro Lab
- (3) EE 3410 Elec Power
- (2) EE 3510 Control
- (2) EE 2810 ECE Tools
- (3) EE 3520 Elec Fields

FALL 8
- (3) EE 4810 SR DSN 1
- (3) EE 4820 SR DSN 2
- (3) EE Design
- (3) EE Design
- (3) EE Design

SPRING 1
- (3) CSCI 1253 Intro CSC
- (3) MATH 2060 DE & Lin Alg
- (3) PHYS 2102 Gen Phys II
- (3) CSCI 1254 Intro CSC II
- (3) EE 2230 Electronics

SPRING 2
- (2) EE 2731 Dig Log Lab
- (3) CSC 1254 Intro CSC II
- (3) PHYS 2110 Circuits I
- (3) CSCI 1204 Gen Comp II

SPRING 3
- (2) EE 2730 Digital Logic
- (3) CSC 1254 Intro CSC II
- (3) PHYS 2110 Circuits I
- (3) CSCI 1204 Gen Comp II

SPRING 4
- (2) EE 2740(3)
- (2) EE 2720 Digital Logic
- (3) CSC 1253 Intro CSC
- (3) PHYS 2102 Gen Phys II
- (3) CSCI 1203 Gen Comp

SPRING 5
- (2) EE 2730 Digital Logic
- (3) CSC 1254 Intro CSC II
- (3) PHYS 2110 Circuits I
- (3) CSCI 1204 Gen Comp II

SPRING 6
- (2) EE 2731 Dig Log Lab
- (3) CSC 1254 Intro CSC II
- (3) PHYS 2110 Circuits I
- (3) CSCI 1204 Gen Comp II

SPRING 7
- (2) EE 2120 Micro Lab
- (3) EE 2230 Electronics
- (2) EE 2810 ECE Tools
- (2) EE 2310 Elect. Lab II
- (3) EE 3520 Elec Fields

SPRING 8
- (3) EE Design
- (3) EE Design
- (3) EE Design

BREADTH Elective

BREADTH Elective

BREADTH Elective

HOURS: 42 16 14 16 16 16 16 15

FLOWCHART LEGEND
- Removed
- New
- New Course
- Moved
- Changed
- Merged
Special cases:

It is inevitable that students will fall behind; others will fail classes when they are offered for the final time. Some students may choose to switch to the new flowcharts. The department will work with every one of these cases to minimize the duplication of credit and assure that all of the requirements for graduation are met. For students who choose to switch to the new catalog year (2013-2014), old (deleted) courses will substitute for newly created courses. Students who choose NOT to switch to the new flowchart can take newer courses and substitute them on older catalog years. The department will develop articulation tables that show how these substitutions will occur. This process will be similar to how transfer credits are substituted.

Examples:

Students who **SWITCH TO THE NEW FLOWCHART**:
- Credit in EE 2720 (2) and EE 2730 (2) = EE 2740 (3) + 1 credit of EE 1810
- Credit in EE 3750(2) and EE 3751(2) = EE 3752(3) + 1 credit in EE 1810
- Credit in EE 3221 = EE 2810

Students who **DO NOT SWITCH**:
- EE 3752 (3) = EE 3750 (2) + EE 3751 (1)
- EE 2740 (3) = EE 2730 (2) + EE 2720 (1)
- EE 2810 (2) = EE 3751(1) + EE 2720(1)
- EE 4750 (3) = 3 credits of 4750, leaving them 1 credit short of the necessary 128. I would encourage a student in this case to switch to the new flowchart. EE 4750 can substitute for EE 4755 in this case.

<table>
<thead>
<tr>
<th></th>
<th>SU 13</th>
<th>FA 14</th>
<th>SP 15</th>
<th>SU 16</th>
<th>FA 17</th>
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<tbody>
<tr>
<td>First time</td>
<td>1810</td>
<td>2740</td>
<td>2810</td>
<td>3752</td>
<td>3710*</td>
</tr>
<tr>
<td>Last time</td>
<td>2720</td>
<td>2730</td>
<td>3750</td>
<td>3751</td>
<td>4750(4)</td>
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<tr>
<td>Delete</td>
<td>2720</td>
<td>2730</td>
<td>3751</td>
<td>4710</td>
<td></td>
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**Tabular Summary of EE/EEC**

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<th>FA 14</th>
<th>SP 15</th>
<th>SU 16</th>
<th>FA 17</th>
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</thead>
<tbody>
<tr>
<td>First time</td>
<td>1810</td>
<td>2740</td>
<td>2810</td>
<td>3752</td>
<td>3710*</td>
</tr>
<tr>
<td>Last time</td>
<td>2720</td>
<td>2730</td>
<td>3750</td>
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<td>4750(4)</td>
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<td>2720</td>
<td>2730</td>
<td>3751</td>
<td>4710</td>
<td></td>
</tr>
</tbody>
</table>
Implementation details of the new curricula for electrical (EE) and computer engineering (EEC)

**Fall 2013**
- All incoming students are on the 2013-2014 catalog.
- Initial Offering of EE 1810 for freshman and students interested in switching to the new catalog.
- Do not offer EE 2720. Submit FORM B to delete 2720.
- Offer 2730 for students for the last time who already have 2720.

The departmental teaching net increase is zero. Two credit class and the load is dispersed to many different faculty in ECE and the college of engineering.

**Spring 2013**
- Initial Offering of EE 2740
- Do not offer EE 2730. Submit FORM B to delete EE 2730.

**Fall 2014**
- Initial offering of EE 2810
- Final offering of EE 3750

The departmental teaching load does not change. EE 2810 is a two credit class taught by at least 2 different faculty.

**Spring 2014**
- Do not offer EE 3750. Submit Form B to delete EE 3750.
- Final offering of EE 3751. It may be offered in summer 2014 if demand is sufficient.

**Fall 2015**
- Initial offering of EE 3710*, 3752
- Submit FORM B for EE 4710
- Do not offer 3751. Submit form B to delete EE 3751.
- Final offering of EE 4750 (4) as a four credit course for students matriculating through the senior year. Submit FORM C for EE 4750.

**Fall 2016**
- Initial offering of EE 4755** and EE 4750 as a three credit course.

* May be offered in earlier semesters as a tech elective if demand allows.
** May be offered in earlier semesters as a design elective if demand allows.
Department of Electrical and Computer Engineering  
Computer Engineering program  
Justification for 127 Credit Hours

Extra Justification

The Department of Electrical and Computer Engineering has proposed a revised undergraduate computer engineering (EEC) curriculum with 127 credit hours. (The existing EEC curriculum requires 128 credit hours.) Justifications for having 120+ credit hours for this program rely on (a) institution-based analysis and (b) content-based analysis of computer engineering programs.

Institution-Based Analysis

Our analysis shows that the average credit hours from 43 SREB peer institutions for EEC programs is 127.3.

To provide institution-based analysis, we consider five typical institutions in SREB.

- Two universities (Auburn and MSU) have programs similar to LSU in terms of number of credit hours needed for graduation. They represent 33 SREB peer institutions where credit requirement is similar.
- Two universities (University of Maryland and NCSU) have less number of credit hours required for graduation. They represent three SREB peer institutions with similar credit requirements.
- One university (Georgia Tech) has 132 credit hours that are more than the credit hour requirement at LSU. It is one of seven SREB peer institutions where credit requirement is more.

Table 1 illustrates details about engineering (including computer science) courses and non-engineering (including A/H/S, English, Math, Science, and ROTC) courses in the EEC curriculum for these institutions in SREB region. In general,

- engineering courses have more number of credit hours as compared to that of non-engineering courses and
- programs at Georgia Tech, University of Maryland, and MSU have a wider gap between engineering and non-engineering course hours. University of Maryland requires considerably lesser number of math and science courses in its EEC program as compared to that in its EE program.

Table 1: Comparison of Engineering vs. non-Engineering Course hours at five institutions in SREB

<table>
<thead>
<tr>
<th>Computer Engineering Program</th>
<th>Auburn University</th>
<th>MSU, Starkville</th>
<th>Georgia Tech</th>
<th>University of Maryland</th>
<th>NCSU, Raleigh</th>
<th>LSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Total Credit Hours; (b) Engineering and Computer Science Credit Hours, and (c) Non-Engineering, Including A/H/S, English, Math, Science, Sports or ROTC, credit hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) 128</td>
<td>128</td>
<td>132</td>
<td>126</td>
<td>126</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td>(b) 64</td>
<td>70</td>
<td>72</td>
<td>81</td>
<td>67</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>(c) 64</td>
<td>58</td>
<td>60</td>
<td>45</td>
<td>59</td>
<td>59</td>
<td></td>
</tr>
</tbody>
</table>

Content-Based Analysis

It is absolutely necessary to have 120+ credit hours status for the EEC program to maintain instruction/learning goals of an LSU Engineer. In the following, we analyze the contents of these two programs to support our argument. Note that the EEC program needs the following.

1. 59 credit hours (refer to Figure 1) include courses from A/H/S, English, Math, Physics, Chemistry, and Biology to satisfy constituencies such as 39 hours mandated for (A) GENED, (B) 32 hours for ABET Criterion 5, (C) ABET program-specific criterion, and (D) ethics.
ii. 6 credit hours are devoted for 'Capstone Design' that trains a student on diverse issues such as application of knowledge learnt in other courses to formulate and solve engineering design problems, multidisciplinary teamwork, communication skill, safety, engage in learning, professional and ethical responsibility, critical thinking, etc. for the programs.

Considering (i) and (ii) for EEC leaves 127 - 65 = 62 credit hours to train an LSU engineer in the program (Figures 2 and 3). Note that an EEC program needs program-specific courses, including courses from computer science, to fulfill core, breadth, and depth requirements as mandated by ABET (the engineering accreditation organization).

iii. If we limit to strictly 120 credit hours, the number 62 credit hours drops to 55 hours for the EEC program, which means only 18 courses, assuming 3 hr/course, remains to train an EEC engineer in core, breadth, and depth topics of the program.

iv. However, by maintaining 120+ status (127 hrs), we get about 2 - 3 extra courses to include laboratory, design, and elective courses to deal with hands-on experience and rigor and challenge of the technical knowledge required for an LSU engineer.

---

A. GENED requirement (39 hrs) — to complement the technical content
B. College level Math and Basic Science (1 yr -> 128/4 = 32 hrs)
C. Program Requirement: Probability and statistics, differential and integral calculus, advanced math, sciences — including biological, chemical, or physics
D. Ethics

Figure 1: Composition of Non-Engineering topics in EEC program at LSU

<table>
<thead>
<tr>
<th>58 credit hrs for non-engineering</th>
<th>6 credit hours Capstone design 6 credit hours</th>
<th>56 credit hours in the program, including other computer science courses (and is less than 50% of 126 credit hours)</th>
</tr>
</thead>
</table>
| 62 credit hrs for core/breadth/depth | ← | ←

Figure 2: Illustrating EEC program content analysis using 127 hrs
Hi John,
Thanks for informing the computer science department of the newly created EE courses, EE 2740 and EE 3752, and about the new numbering for EE 4710 (3710).
The Computer Science Department has completed the paperwork for the appropriate changes to the courses CSC 3102 and 3501:
- CSC 3102 - Dropped reference to EE 2720 for concurrent enrollment and added EE 2740
- CSC 3501 - In the list of courses for which students may not receive dual enrollment,
  - CSC 2280 has been dropped. EE 3752 has been added.
  - EE 3750 will be deleted in due time after it is estimated that EE and Comp. Eng students have exited the university with possible credit in EE 3750.
  - EE 3755 will remain on the list.

The Computer Science Department looks forward to more discussion in the near future on how EE networking and communication courses like EE 3710 can be utilized toward our Distributed Systems and Networking concentration.

Regards,
Coretta
Coretta Douglas, Ph.D. Computer Science
Instructor/ Undergraduate and Instructional Coordinator
LSU - Department of Computer Science
295 Coates Hall

On Fri, 24 Feb 2012 09:10:04 -0600, John D Scalzo wrote
> Coretta,
> > The computer engineering curriculum is undergoing a significant revision. A few of these changes require your attention:
> > 1.) A new course EE 2740 Digital Logic (3) is replacing EE 2720 Digital Logic 1 (2) and EE 2730 Digital Logic 2 (2). 2720 and 2730 will be deleted. The new course combines the two old courses. Content relating to hardware description language (HDL) is being moved into a new required course for the computer engineering curriculum EE 4755 Digital Design using Hardware Description Languages
> > 2.) A new course EE 3752 Microprocessor Systems (3) is replacing EE 3750 Microprocessor Systems (2) and EE 3751 Microprocessor Laboratory (2). 3750 and 3751 will be deleted. The new course combines the lecture and the lab without removing any content.
> > 3.) The course number for EE 4710 Communications in Computing is changing to EE 3710 Communications in Computing. The content of the new course remains the same. This course is now required for the computer engineering curriculum.
> > John Scalzo
> Electrical and Computer Engineering
> Instructor, Undergraduate Advisor
> Rector, Engineering Residential College
> 102 F Electrical Engineering
> (225)578-5478
> http://www.ece.lsu.edu/scalzo/index.html
> >
Hi John,

The Computer Science Department acknowledges that CSC 1254 is being omitted from the Electrical Engineering concentration.

Regards,

Coretta
Coretta Douglas, Ph.D. Computer Science
Instructor/Undergraduate and Instructional Coordinator
LSU - Department of Computer Science
295 Coates Hall

On Thu, 12 Apr 2012 14:39:14 +0000, John D Scalzo wrote
> One more change -- EE is dropping CSC 1254 from its curriculum.
> John
>
Pratul,

Philosophy agrees to the plan set out in your memo of July 17 and endorses option 1. Please submit your curriculum with our blessing.

We'll continue on the path to getting PHIL 2018 approved as a Gen Ed course on our end.

Best,

Jeff

Jeffrey Roland
Associate Professor
Section Head for Philosophy
Department of Philosophy
102 Coates Hall
Louisiana State University
Baton Rouge LA 70803

Email: jroland@lsu.edu
Phone: (225) 578-2388
Fax: (225) 578-4897
Web: www.lsu.edu/faculty/jroland

On Jul 17, 2012, at 11:36 AM, Pratul K Ajmera wrote:

Dear Jeff,

It was indeed a pleasure to meet you yesterday. As per our discussions, I am attaching a memo requesting your Department/Section to endorse our current curricula forms that require our students to take Phil 2020 in the interim
while Phil 2018 is being considered as a new Gen Ed course. Our division will immediately include Phil 2018 as an alternative option to Phil 2020 as soon as Phil 2018 becomes a Gen Ed course. In the event Phil 2018 does not become a Gen Ed course, we will have to teach the ethics requirement by ourselves through some of our existing engineering courses. As you can see the latter is not an optimal approach.

We would like you or your Department to agree and endorse option 1 in the attached memo as soon as practical so we can move forward with implementing substantial important revisions to our two degree programs for inclusion in 2013 catalog. The deadline is Oct. 1 for submission to Senate's Courses and Curricula Committee. Thank you for your immediate attention to this request. Please let me know if I can be of any help in this matter.

Sincerely,

Pratul

Pratul Ajmera
Interim Division Chair
Electrical & Computer Engineering
School of Electrical Engineering & Computer Science
3101-A Patrick F Taylor Hall
Louisiana State University and A&M College
Baton Rouge, LA 70803
Ph: (225) 578-5243; Fax: (225) 578-5200
ajmera@lsu.edu

<Jeffrey Roland_Phil 2018_July 17_2012.pdf>
REQUEST FOR ADDING, CHANGING, OR DROPPING AN UNDERGRADUATE CURRICULUM
PLEASE SUBMIT 17 COPIES OF EACH REQUEST

Department: Electrical Engineering and Computer Science
College: Engineering
Name of Curriculum/Major: Computer Engineering
Type of Degree: BS
Date: 3/15/12

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: Show present catalog description which is to be changed (left column) and the changes proposed (right column) on a separate sheet of paper. 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>
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<tbody>
<tr>
<td>Total semester hours in current curriculum</td>
<td>128</td>
</tr>
<tr>
<td>Total semester hours in proposed curriculum</td>
<td>127</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date: 3/15/2012
Department Chair's Signature: P.V. 3/30/2012

College Faculty Approval Date: 4/18/12
College Dean's Signature: (Date)

Chair, FS C & C Committee: (Date)
Academic Affairs Approval: (Date)
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 which 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.

<table>
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<th>General Education Requirement</th>
<th>Course(s)</th>
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<th>Curriculum Year</th>
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<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
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<td>ENGL 2000</td>
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<td>(X) 4&lt;sup&gt;th&lt;/sup&gt;</td>
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<td>Analytical Reasoning (6 hrs.)</td>
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<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<td>MATH course.)</td>
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<td>(X) 3&lt;sup&gt;rd&lt;/sup&gt;</td>
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<td>MATH 1552</td>
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<td>(If 2 course sequence is taken in the</td>
<td>PHYS 2102</td>
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<td>physical sciences, the additional 3 hour</td>
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<td>course must be from the life sciences, and</td>
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<td>Social Sciences (6 hrs.)</td>
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<td>(X) 2&lt;sup&gt;nd&lt;/sup&gt;</td>
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<td>2000-level.)</td>
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**Proposed**

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Approved Breadth Electives: Select one course from this list:
- EE 3150
- EE 3220
- EE 3520
- EE 3610

**Approved Breadth Electives:**

- EE 3150
- EE 3220
- EE 3520
- EE 3610
Summary of Computer Engineering (EEc) curricula changes

I) Form D for EEC – we revised the curriculum as a result of feedback from faculty and students over the last few years to improve retention and matriculation rates. We also reviewed programs around the southeast including Georgia Tech, North Carolina State, Auburn, Mississippi State and Virginia Tech. Items (a) through (e) are identical for the electrical engineering (EE) curriculum.

a. Adding EE 1810, an introduction to electrical and computer engineering. Many universities are adding this course to expose students as early as possible to their major and careers.

b. Adding EE 2810, a course that introduces students to computer tools used in electrical and computer engineering courses and careers.

c. Combining EE 3750 (2 credit lecture) and EE 3751 (a 2 credit lab course that follows 3750) into one 3 three credit class that has 2 hours of lecture and 2 hours of lab. EE 3752

d. Merging two sequential 2 credit classes (EE 2720-2730) into 1 new three credit class EE 2740. Many other programs offer digital logic this way.

e. PHIL 2020 is now the only course students can take to meet the ethics requirement. Since this course is an approved humanities elective, it will count as one of the three required humanities electives.

** The items (f) through (h) below are unique to the EEC curriculum

f. Adding new required courses. EE 3710 Communications in Computing and EE 4755 Digital Design using Hardware Description Languages. These topics have evolved into ones of significant importance to the computer engineer. EE 3710 is actually the same course as EE 4710, which was a technical elective for EEC. It will be deleted.

h. Giving EE students the flexibility of choosing one EE breadth elective course. This course can be taken from a list of EE courses at the junior level spanning all of the other areas of electrical engineering. Computer engineering students would benefit from courses in signal processing, controls, power, electronics etc.

*EE 3150 replaces EE 3140 in the Junior Year. EE 3140 was dropped due to ten year inactivity. However, it is a required course in both Electrical & Computer Engineering curricula. This proposed course will have a greater connection with electrical and computer engineering applications and will better satisfy requirements of ABET and of follow up courses.
II) Form A – Courses added

EE 1810 (2) – Intro to ECE is required for both EE and EEC
EE 2810(2) – ECE tools course is required for both EE and EEC
EE 2740(3) – replaces EE 2720 and 2730 and is required for both EE and EEC
EE 3710(3) – replaces EE 4710 and now required for EEC
EE 3752(3) – replaces EE 3750 and 3751 and is required for EEC, breadth elective for EE
EE 4755(3) – required for EEC
EE 3150(3) – replaces EE 3140 due to 10 yr. inactivity

III) Form B – Courses deleted

EE 3750(2), 3751(2), EE 2720 (2), 2730 (2), EE 4710(3)

IV) Form C – course changes resulting from (II) and (III). Full explanations and justifications follow with the forms.

EE 2120 – 1810 prerequisite added
EE 2731, 3755, 4242, 4720, 4740 – 2740 prerequisite added, 2730 removed
EE 3160, 3530, 3610, 4745, 4780 – 2810 prerequisite added
EE 4720 – 3752 prerequisite added, 3750 removed
EE 4750 – 3752 prerequisite added and 3750 removed. Course changed from 4 to 3 credits (lab time reduced from 6 to 2 hrs.)
EE 4770, 4785, 7710 – 3752 prerequisite added, 3750 removed
EE 4810 – 3752 prerequisite added and Breadth electives now required
EE 7770 – 3710 prerequisite added
This packet was generated in response to the following email:

Dr. Scalzo,

I have reviewed the EEC and EE proposals. Most of it was quite nicely done. I have combined the two packets by redoing the EEC and EE curricula to add the 3150 change. I have also changed the flowchart to show 3150 instead of 3140 and added verbiage to the justifications stating the reasoning for the addition of 3150, which is to replace 3140 due to ten year inactivity.

However, there are a few issues I believe the committee will address. If you can get these into me before Friday morning, we have a better chance of an approval outright. Also, I would advise coming to the meeting for Committee questions or concerns. This also gives a higher chance of approval if the committee can get answers at the meeting. The next meeting is October 2nd from 2:15-4:15 in 129 Himes Hall.

1. Are the Breadth Electives the same for EE and EEC?
2. For the Computer Engineering Curriculum, the justification does not point out why EE 3220 and 3221 were dropped from the curriculum. I assume it is because they have been moved to the breadth electives. But the Committee will want to know that.
3. Same for Electrical Engineering but also add reasoning for dropping EE 3410 and 3530.
4. I do not see the Computer Science paperwork. They said in March of this year that they had completed the paperwork. (I saw this in the email.) Please note that the proposals that are affected by CSC’s ability to submit paperwork to me will cause them to be either conditionally approved or returned.
5. EE 4745- We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.
6. EE 3710- the justification needs to explain the choice of prerequisites. The Committee will want to know why these courses complement the course.
7. EE 4755- explain choice of prerequisites.
8. EE 3752- need a letter of support from CSC to add CSC 1253 as a prerequisite. (I just need an email).
9. EE 2810- need a letter of support from CSC to add 1253 as a prerequisite.
10. EE 2740- need a letter of support from MATH to add MATH 1550 as a prerequisite.
11. EE 1810- we will need a 14 week outline for the syllabus.
Items 1, 2 and 3 are addressed here related to Breadth Electives.

**EE Breadth Electives**

In keeping with some trends of some of the top electrical and computer programs around the country, the Division of ECE has given students some flexibility to choose from a list of junior level EE courses. The old curriculum required EE 3410, EE 3530, EE 3220, EE 3221, EE 3750 and EE 3751. Students then had only three technical electives to choose from EE 3232, EE 3160, EE 3755, and all of the EE 4xxx technical electives. Typically students only chose the 4000 level courses and just resigned the fact that there was not enough room in the curriculum for these other courses. The new EE curriculum allows students to choose six 3000 level EE breadth electives from a list of 8. Students are able to build a resume of classes they choose. The four 3000 level courses that appear to be dropped from the curriculum (EE 3410, EE 3530, EE 3220, EE 3221) were simply moved to the breadth elective list. Students will end up taking at least two of these classes and possibly all of them, depending on which 18 hours they choose from the list of breadth electives.

Here is the official wording for the EE Breadth Electives:

**EE Breadth Electives** - Students must choose at least 18 hours of Breadth Electives. At least 9 hours must be chosen from courses marked with *. Breadth Electives include: EE 3160*, 3220*, 3221, 3232, 3410*, 3530*, 3752, 3755

**EEC Breadth Electives**

The computer engineering degree is more specialized than electrical engineering degree by design. Advancements in the computer engineering profession require that students have courses in computer networking (EE 3710) and digital design using hardware description languages (EE 4755). These courses are more important to the computer engineering student than a second course in electronics (EE 3220) and a second course in electronics lab (EE 3221). The new EEC curriculum still has three labs at the 2000 and 3000 level, which is sufficient. EEC students can still take EE 3220 since it appears on the breadth elective list. However, if students are interested in digital media or controls etc., they can choose to take a different EE course at the junior level simply by choosing a different breadth elective.

Here is the official wording for the EEC Breadth Elective:

**EEC Breadth Elective** - Select one course from this list: EE 3160, 3220, 3320, 3410, 3530, 3610
TOTAL HOURS = 127

**COMPUTER ENGINEERING**

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A prerequisite to any electrical engineering course is met only by obtaining a "C" or better in each course cited as a prerequisite.

**FLOWCHART LEGEND**

- Credit required
- Credit or registration required
- Co-registration required
- General Education – See 2013-2014 General Catalog

- New
- Moved
- Changed

In addition to EE 3762, the prerequisite is senior standing and one of 3160, 3220, 3410, 3530, or 3765

4/3/12
TOTAL HOURS = 428 127

COMPUTER ENGINEERING

FALL 2012  2013

SPRING 2013  2014

FALL  2013

SPRING  2014

FALL

SPRING

FALL

SPRING

FALL

SPRING

HOURS: 16 15 15 18 18 16 15 47 = 428 127

NEW COURSE

MERGED

REMOVED

NEW

MOVED

CHANGED

FLOWCHART LEGEND

Merged

Removed

New

Moved

Changed
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING UNDERGRADUATE MINOR

Department: Electrical and Computer Engr  
Name of Minor: Electrical and Computer Engineering  

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

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).

ACTION (check appropriate box):

( ) ADDING: Show the entire new minor using catalog format. Use plain sheets and attach.  
(x) CHANGING: List present catalog description which is to be changed (left column) and the changes proposed (right column). In proposed column use strikeout and bold to indicate deletions and additions. Explain all changes adequately on attachment.  
( ) SUSPENDING: Provide an adequate explanation for suspending the minor on plain sheets and attach.  
( ) DROPPING: Provide an adequate explanation for dropping the minor on plain sheets and attach.

MINOR

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<td>Any student not majoring in electrical or computer engineering may obtain a minor in electrical and computer engineering by completing each of these courses with a grade of &quot;C&quot; or better: EE 2120, 2130, 2230, 2720, 2730, 3610, 3750 and six additional hours of electrical engineering course work excluding EE 2950, 3060, 3061, 3070 and 3950.</td>
<td>Any student not majoring in electrical or computer engineering may obtain a minor in electrical and computer engineering by completing each of these courses with a grade of &quot;C&quot; or better: EE 2120, 2130, 2230, 2720, 2730, 2740, 3610, 3750, 3752 and six additional hours of electrical engineering course work excluding EE 2950, 3060, 3061, 3070 and 3950.</td>
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APPROVALS:

Department Faculty Approval Date: 3/15/2012  
Department Chair's Approval Date: 3/30/2012  
College Dean's Approval Date: 1/11/12

College Faculty Approval Date: 4/18/12  
Academic Affairs Approval Date: 10/6/12
Justification:

EE 2720 (2) and EE 2730 (2) are being combined into one course: EE 2740 (3). This combined course will allow for easier matriculation.

EE 3750 (2) and EE 3751(2) are being combined into one course: EE 3752 (3). This combined course will allow for easier matriculation and the elimination of redundancy. The lab lecture of EE 3751 is more of a review of EE 3750. The review will no longer be necessary since the labs will be tied directly to concurrent lectures.

The total number of hours in the minor is not affected by these changes.
REQUEST FOR DROPPING A COURSE

Department Mechanical & Industrial Engineering                      Date 8/15/12

College Engineering

Course rubric & no. ME 7823 Title Computation of Fluid flow and Heat Transfer

Semester hours of credit: 3

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:
(If additional space is needed, please attach a separate piece of paper.)

Is this course a prerequisite or corequisite for any other courses? Yes ( ) No ( x )

If answer to above is yes, please list courses by rubric and course number.
(If additional space is needed, please attach a separate piece of paper.)

Rubric Course # Rubric Course #

Rubric Course # Rubric Course #

Is this course on the general education list? Yes ( ) No ( x )

If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:

This course has been renumbered ME 7343 to provide a logical numbering scheme for thermal science graduate courses.

APPROVALS:

Department Faculty Approval Date 8/13/12

Department Chair's Signature 9/25/12

Graduate Dean's Signature 10-2-12

College Faculty Approval Date 9/17/12

College Dean's Signature 9/25/12

Chair, FS C & C Committee 10-2-2012

Academic Affairs Approval 10/8/12

College Contact E-mail:
REQUEST FOR DROPPING A COURSE

Department Mechanical & Industrial Engineering Date 8/15/12
College Engineering

Course rubric & no. ME 7843 Title Viscous Flow

Semester hours of credit: 3

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:
(If additional space is needed, please attach a separate piece of paper.)

Is this course a prerequisite or corequisite for any other courses? Yes ( ) No ( )
(If additional space is needed, please attach a separate piece of paper.)

Rubric ME Course # 7443 Rubric Course #
Rubric Course # Rubric Course #

Is this course on the general education list? Yes ( ) No ( )
(If yes, attach approval of drop from General Education Committee)

REASON FOR REQUEST TO DROP COURSE:
The material in this course has been integrated into the course sequence in Advanced Fluid Mechanics ME 7313 and ME 7323. These courses are going to be required for every graduate student in thermal science.

APPROVALS:
Department Faculty Approval Date 8/13/12 College Faculty Approval Date 9/17/12
Department Chair's Signature (Date) College Dean's Signature (Date)

Graduate Dean's Signature (Date) Chair, FS C & C Committee (Date)

College Contact: (Please print name.) Academic Affairs Approval (Date)

College Contact E-mail:
REQUEST FOR DROPPING A COURSE

Department Mechanical & Industrial Engineering

College Engineering

Course rubric & no. ME 7853

Title Advanced Boundary Layer Theory

Semester hours of credit: 3

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:

(If additional space is needed, please attach a separate piece of paper.)

Is this course a prerequisite or corequisite for any other courses? Yes ( ) No ( x )

If answer to above is yes, please list courses by rubric and course number.

(If additional space is needed, please attach a separate piece of paper.)

Rubric Course # Rubric Course #

Is this course on the general education list? Yes ( ) No ( x )

If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:

The essential material on this topic has been integrated into the course sequence in Advanced Fluid Mechanics ME 7313 and ME 7323. These courses are going to be required for every graduate student in thermal science. Much of the material in this course is no longer used in research and development.

APPROVALS:

Department Faculty Approval Date 8/13/12

Department Chair's Signature (Date) 9/25/12

Graduate Dean's Signature (Date) 10/2/12

College Faculty Approval Date 9/17/12

College Dean's Signature (Date) 10/12/2013

Chair, FS.C & C Committee (Date) 10/12/12

Academic Affairs Approval (Date) 10/12/12

College Contact: ____________________________

College Contact E-mail: ____________________________
REQUEST FOR DROPPING A COURSE

Department Mechanical & Industrial Engineering

College Engineering

Course rubric & no. ME 7863 Title Fluid Dynamics

Semester hours of credit: 3

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter.
(If additional space is needed, please attach a separate piece of paper)

Is this course a prerequisite or corequisite for any other courses? Yes ( ) No ( X )

If answer to above is yes, please list courses by rubric and course number.
(If additional space is needed, please attach a separate piece of paper)

Rubric Course # Rubric Course #

Is this course on the general education list? Yes ( ) No (x )

If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:

The material on this topic has been integrated into the course sequence in Advanced Fluid Mechanics ME 7313 and ME 7323. These courses are going to be required for every graduate student in thermal science.

APPROVALS:

Department Faculty Approval Date 8/13/12 College Faculty Approval Date 9/17/12

Department Chair's Signature 9/25/12 College Dean's Signature

Graduate Dean's Signature (Date) Chair, FS C & C Committee (Date)

College Contact: (Please print name)

College Contact E-mail:

Effective Date:
REQUEST FOR DROPPING A COURSE

Department Electrical and Computer Engineering
College Engineering

Course rubric & no. EE 3751 Title Microprocessor Laboratory

Semester hours of credit: 2

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:
(If additional space is needed, please attach a separate piece of paper.)

Major in Electrical Engineering
Major in Computer Engineering

Is this course a prerequisite or corequisite for any other courses? Yes (x) No ( )

If answer to above is yes, please list courses by rubric and course number.
(If additional space is needed, please attach a separate piece of paper.)

Rubric EE Course # 4750 Rubric _____ Course #
Rubric EE Course # 4810 Rubric _____ Course #

Is this course on the general education list? Yes ( ) No (x)
If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:
The course is being replaced by EE 3752.

APPROVALS:

Department Faculty Approval Date 3/15/2012

Department Chair’s Signature 4/2/2012

College Faculty Approval Date 4/18/12

College Dean’s Signature 4/20/12

Graduate Dean’s Signature 10/2/2012

Chair, FS C & C Committee 10/2/2012

Academic Affairs Approval 10/8/12
REQUEST FOR DROPPING A COURSE

Department: Electrical and Computer Engineering
College: Engineering

Course rubric & no. EE 3750  Title: Microprocessor Systems
Semester hours of credit: 2

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:

(If additional space is needed, please attach a separate piece of paper.)

Major in Electrical Engineering 
Major in Computer Engineering

Is this course a prerequisite or corequisite for any other courses? Yes (x) No ( )
If answer to above is yes, please list courses by rubric and course number.
(If additional space is needed, please attach a separate piece of paper.)

Rubric EE Course # 3751 Rubric EE Course # 4770
Rubric CSC Course # 3501 Rubric EE Course # 4720

Is this course on the general education list? Yes ( ) No (x)
If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:
The course is being replaced by EE 3752.

APPROVALS:
Department Faculty Approval Date 3/15/12
Department Chair's Signature 4/2/2012

College Faculty Approval Date 4/18/12
College Dean's Signature 4/20/12

Graduate Dean's Signature 10/2/2012
Chair, FS C & C Committee

Academic Affairs Approval 10/8/12
REQUEST FOR DROPPING A COURSE

Department Electrical and Computer Engineering

College Engineering

Date 3/15/12

Course rubric & no. EE 4710

Title Communications in Computing

Semester hours of credit: 3

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

Has this drop been discussed with and approved by all departmentscolleges affected? Yes (x) No ( ) N/A ( )

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:

(If additional space is needed, please attach a separate piece of paper.)

Is this course a prerequisite or corequisite for any other courses? Yes (x) No ( )

If answer to above is yes, please list courses by rubric and course number.

(If additional space is needed, please attach a separate piece of paper.)

Rubric EE Course # 7770 Rubric Course #
Rubric Course # Rubric Course #

Is this course on the general education list? Yes ( ) No (x)

If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE

The course number is being changed to EE 3710.

APPROVALS:

Department Faculty Approval Date 3/15/2012

Department Chair's Signature

( )

College Faculty Approval Date 4/18/12

College Dean's Signature

( )

Graduate Dean's Signature

( )

Chair, FS C & C Committee

( )

Academic Affairs Approval

( )
REQUEST FOR DROPPING A COURSE

Department Electrical and Computer Engineering Date 24FEB12
College Engineering
Course rubric & no. EE 2730 Title Digital Logic 2
Semester hours of credit: 2

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.
Has this drop been discussed with and approved by all departments/colleges affected? Yes (x) No ( ) N/A ( )
This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:
(If additional space is needed, please attach a separate piece of paper.)
Major in Electrical Engineering Minor in Electrical and Computer Engineering
Major Computer Engineering

Is this course a prerequisite or corequisite for any other courses? Yes (x) No ( )
If answer to above is yes, please list courses by rubric and course number.
(If additional space is needed, please attach a separate piece of paper.)
Rubric EE Course # 2731 Rubric EE Course # 4740
Rubric EE Course # 3755 Rubric EE Course # 4242

Is this course on the general education list? Yes ( ) No (x)
If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:
The course is being replaced by EE 2740.

APPROVALS:
Department Faculty Approval Date 3/15/2012 College Faculty Approval Date 4/18/12
P.K. Jhaveri 3/30/2012 L.J. Miller 4/20/12
Department Chair's Signature (Date) College Dean's Signature (Date)

Graduate Dean's Signature (Date) Chair, FS C & C Committee (Date)

Academic Affairs Approval (Date)
REQUEST FOR DROPPING A COURSE

Department: Electrical and Computer Engineering  
College: Engineering  
Date: 24FEB12

Course rubric & no.: EE 2720  
Title: Digital Logic 1  
Semester hours of credit: 2

NOTE: Affected departments must be notified in writing and with adequate time allowed for written response(s). Responses must be included with this form.

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

This course is presently included or referenced in the following curriculum, minor, concentration, area of specialization, or catalog chapter:

(If additional space is needed, please attach a separate piece of paper.)

Major in Electrical Engineering  
Major in Computer Engineering

Is this course a prerequisite or corequisite for any other courses? Yes (x) No ( )

If answer to above is yes, please list courses by rubric and course number.  
(If additional space is needed, please attach a separate piece of paper.)

Rubric EE Course # 2730 (or related course)  
Rubric CSC Course # 3102  
Rubric Course #

Is this course on the general education list? Yes ( ) No (x)

If yes, attach approval of drop from General Education Committee

REASON FOR REQUEST TO DROP COURSE:

The course is being replaced by EE 2740.

APPROVALS:

Department Faculty Approval Date: 3/15/2012  
Department Chair's Signature: 3/30/2012

College Faculty Approval Date: 4/18/12  
College Dean's Signature: 4/20/12

Graduate Dean's Signature:  
Chair, FS C & C Committee: 10/2/2012

Academic Affairs Approval: 10/18/12
REQUEST FOR ADDITION OF NEW COURSE

Department: Philosophy & Religious Studies
Humanities & Social Sciences

College: ____________________________

Date: 4/17/12

PROPOSED COURSE
Rubric & No.: 2050
Title: HONORS: Ethics

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 PHIL 2020; Ethics

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

COURSE TYPE
(Indicate hours in the appropriate course type)

/ LEC/REC / LEC/SEM / LEC / LAB / LEC/LAB / SEM / CLIN/PRACT / RES/AND
Maximum enrollment per section: 25 (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)

2050 HONORS: Ethics (3) Same as PHIL 2020 with a special honors emphasis for qualified students.
Credit will not be given for this course and PHIL 2020. Supervised reading, discussion, research, and writing.

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

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 8/12/12
College Faculty Approval 9-12-12

Department Chair’s Signature ____________________________
(9/12/12)

College Dean’s Signature ____________________________
(9-13-12)

Graduate Dean’s Signature (for 4000 level and above) ____________________________
(10/2/12)

College Contact: ____________________________
(Please print name)

College Contact E-mail: ____________________________

Academic Affairs Approval ____________________________
(10/8/12)
Philosophy 2020 (Ethics) is taught each semester, and regularly attracts a high number of students. Adding an honors version of that course (Philosophy 2050) allows students the option of receiving honors credit for a more rigorous and writing intensive version of the Ethics course. We have a few faculty members who are willing and able to teach the course at both the 2020 and 2050 levels.
OBJECTIVE

This course will cover the ethical theories of some of history’s most important philosophers. We will read some of their most important moral works: Plato’s Republic, Aristotle’s Nicomachean Ethics, Peter Abelard’s Ethical Writings, Immanuel Kant’s Groundwork for the Metaphysics of Morals, and John Stuart Mill’s On Liberty, and other essays found in Basic Writings of John Stuart Mill). Since this is an honors course, it will be reading and writing intensive. There will not be a large amount of reading, but it will all be very challenging. You will be expected to do the readings at least three times: before class, after class, and then a third time prior to writing your paper. There will be three short papers, one long paper, and two exams (midterm and final). You will end the class with improved abilities to read critically, write analytically, think philosophically, and, hopefully, live ethically.

AVAILABILITY

➢ Office Hours: Tuesday, Thursday 9-10:30
  o Office: Coates 314
  o And by appointment
    - Appointments entail commitments:
      - If you make one, you are obligated to keep it.
➢ Email: RationalAutonomy@Gmail.Com
  o I normally respond to email within 24 hours.
  o If you haven’t heard from me in that time, email it again in case I didn’t receive it.
➢ I will also be using Moodle to update readings and to pass out handouts
  o This course will be as paperless as possible.
➢ Chat: I can be found both at the above address for Gmail chat and at DrJamesRocha for AIM.

GRADES/COURSE REQUIREMENTS

➢ On each assignment, I use the 12-point scale, which is identical to the 4-point scale, multiplied by 3. This scale is incredibly easy to learn because each point is equal to a third of a grade:
  o 0 = F, 1 = F+, 2 = D-, 3 = D, 4 = D+, 5 = C-, 6 = C, 7 = C+, 8 = B-, 9 = B, 10 = B+, 11 = A-, 12 = A, 13 = A+
➢ For course grades, the pluses and minuses will be dropped, and the breakdown will be:
  o 0.0 -- 1 = F
  o 1.1 -- 4 = D
  o 4.1 -- 7 = C
  o 7.1 -- 10 = B
  o 10.1 -- 13.00 = A
There will be three short papers (explained below), worth 10% each.
There will be a midterm, worth 15%.
There will be a final, worth 25%.
There will be a term paper on an ethical topic of your choosing, worth 30%.

What You'll Need for the Course

- You'll need three different colored pens (Pre-, In-, Post-Class)
- You'll need to **not** have a highlighter.
- You'll need all the books for the course.
  - You cannot share books – you need to mark up your own copy.
  - It is acceptable to have a different translation, but it is not recommended.
  - You must let me know if you have a different translation of a book: I will not approve just any translation.
  - The only source for information you should use other than the assigned course books is the Stanford Encyclopedia for Philosophy, which can be found here:
    - You are only allowed to use other sources for the Term Paper.
    - All sources, especially ones other than the primary texts of the philosophers, should be read critically and not assumed to be accurate.

Short Papers

We will cover five philosophers in this course. For each philosopher, there will be a short paper assignment – for a total of five assignments. You are required to do three of the five assignments. If you do a fourth one, your lowest grade will be dropped. If you do a fifth one, it will be ignored. If you do less than three papers, then you will fail the remaining ones (in other words, if you do one paper, you fail two).

The paper requires you to take a paragraph of the philosopher we have just read and write 400 words on both the meaning and the context of that paragraph. By context, I mean how does your paragraph relate to the philosopher's larger moral theory? You should look for a paragraph of roughly 5-7 lines (though two related, consecutive paragraphs can be joined and you can consider a conceptually isolated section of a larger paragraph). The paper will be due two lectures after the completion of lectures on the philosopher in question (due dates will be announced in lecture and updated on Moodle). If we complete a philosopher in Tuesday’s lecture, papers are due before the following Tuesday lecture.

The purpose of this assignment is to establish a certain set of skills that will be necessary for most higher order pursuits you may take on after you graduate: a) the skill of analyzing conceptually difficult paragraphs where a great deal is at stake; b) the skill of containing your writing into a limited amount of space; and c) the skill of writing about something incredibly difficult.
RULES AND PROCEDURES

- All rules and procedures that regulate conduct and courses at Louisiana State University will apply to this course (obviously, since it's a course at Louisiana State University), and it is the student's responsibility to know such rules, which can be found at:
- A fuller account of rules specific to our class will be covered in lecture on the first day, and will be available on Moodle in the PowerPoint slides for that lecture.
- Any questions or confusion about rules and procedures, such as concerning classroom conduct or what counts as cheating, must be taken up with the professor as soon as they come up.

(Tentative) Reading List

<table>
<thead>
<tr>
<th>Date</th>
<th>Reading</th>
<th>Assignment/Course Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1T Jan 17</td>
<td>None</td>
<td>Introductions and Course Rules</td>
</tr>
<tr>
<td>2R Jan 26</td>
<td>Plato, Book I</td>
<td></td>
</tr>
<tr>
<td>3T Jan 31</td>
<td>Finish Plato, Book I</td>
<td></td>
</tr>
<tr>
<td>3R Feb 2</td>
<td>Plato, Book II</td>
<td></td>
</tr>
<tr>
<td>4T Feb 7</td>
<td>Finish Plato, Book II</td>
<td></td>
</tr>
<tr>
<td>4R Feb 9</td>
<td>Aristotle, Book I</td>
<td></td>
</tr>
<tr>
<td>5T Feb 14</td>
<td>Aristotle, Book I</td>
<td>Plato Paper Due Over Email</td>
</tr>
<tr>
<td>5R Feb 16</td>
<td>Aristotle, Book II</td>
<td></td>
</tr>
<tr>
<td>6T Feb 21</td>
<td>Mardi Gras Holiday</td>
<td></td>
</tr>
<tr>
<td>6R Feb</td>
<td>Aristotle, Book II</td>
<td></td>
</tr>
</tbody>
</table>

¹ First number is the week number, followed by the day of the week (T for Tuesday, R for Thursday).
<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>7T Feb 28</td>
<td>Aristotle/MT Review</td>
</tr>
<tr>
<td>7R Mar 1</td>
<td>Midterm on Ancient Greek Ethics</td>
</tr>
<tr>
<td>8T Mar 6</td>
<td>Abelard, 1-17</td>
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<tr>
<td>8R Mar 8</td>
<td>Abelard, 17-33, Aristotle Paper Due Over Email</td>
</tr>
<tr>
<td>9T Mar 13</td>
<td>Abelard, 33-56</td>
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<tr>
<td>9R Mar 15</td>
<td>Kant, Preface (1-5)</td>
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<td>10T Mar 20</td>
<td>Kant, GWI (7-13)</td>
</tr>
<tr>
<td>10R Mar 22</td>
<td>Kant, GWI (14-18), Abelard Paper Due over Email</td>
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<tr>
<td>11T Mar 27</td>
<td>Kant, GW II (19-31)</td>
</tr>
<tr>
<td>11R Mar 29</td>
<td>Kant, GW II (32-41), Submit Theses + Outlines for Term Paper</td>
</tr>
<tr>
<td>12T April 3</td>
<td>Spring Break</td>
</tr>
<tr>
<td>12R April 5</td>
<td>Spring Break</td>
</tr>
<tr>
<td>13T April 17</td>
<td>Mill, Chap 1 (3-9)</td>
</tr>
<tr>
<td>13R April 19</td>
<td>Mill, Chap 1 (9-16)</td>
</tr>
<tr>
<td>14T April 24</td>
<td>Mill, Chap 2 (17-36)</td>
</tr>
<tr>
<td>14R April 26</td>
<td>Mill, Chap 2 (36-56)</td>
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<tr>
<td>Date</td>
<td>Assignment</td>
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<tr>
<td>15T May 1</td>
<td>Mill, Chap 3 (57-76)</td>
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<tr>
<td>15R May 3</td>
<td>Review</td>
</tr>
<tr>
<td>Finals Week</td>
<td>Mill Paper Due Over Email</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Final from 7:30-9:30 pm</td>
</tr>
<tr>
<td>Term Paper</td>
<td>Term Paper Due at 8 pm over Email</td>
</tr>
</tbody>
</table>

*Note: The dates and assignments are placeholders for demonstration purposes.*
Dear James,

Please forgive me for the delay in my response to your inquiry.

I am delighted that the Philosophy Department wants to offer an Honors section of the 2020 Ethics course. The Honors College supports the proposal.

Thank you for preparing the proposal.

Sincerely,

Ann

Ann Summer Holmes
Associate Dean, Honors College
Louisiana State University
205 French House
Baton Rouge, LA 70803
aholmes@lsu.edu
225-578-8849

From: rationalautonomy@gmail.com [mailto:rationalautonomy@gmail.com] On Behalf Of James Rocha
Sent: Wednesday, April 25, 2012 10:44 AM
To: Ann S Holmes
Subject: Proposal for Philosophy 2050 (an Honors Course) for CAPPEE

Hello Ann,
The Philosophy Department would like to propose an honors version of our 2020 Ethics course as Phil 2050. We have found that the honors versions of our philosophy of history courses (2036 and 2053) and our intro course (1001) have been well received both by philosophy and honors students. Phil 2020 is a regularly offered course that we think would work quite well for honors students in the form of Phil 2050. I've attached Form-A and the justification.

Would Honors approve of the proposed Phil 2050 course?

Thanks,

James
REQUEST FOR ADDITION OF NEW COURSE

Department: Electrical and Computer Engineering
College: ____________________________

Date: 3/15/12

PROPOSED COURSE

Short Title: INTRO TO ECE

Rubric & No.: EE 1810
Title: Introduction to Engineering: Electrical and Computer Engineering

COURSE CREDIT

Graduate Credit: YES x NO

Semester Hours of Credit: 2

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 x 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 1 LAB 1 LEC/LAB 1 SEM 1 CLIN/PRACT 1 RESIND

Maximum enrollment per section: 200

(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)

1810 Introduction to Engineering: Electrical and Computer Engineering (2) Survey of engineering concepts with specific focus on the electrical and computer engineering discipline.

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: ____________________________ Date: ____________

College Faculty Approval: ____________________________ Date: ____________

Department Chair's Signature: ____________________________ Date: ____________

Graduate Dean's Signature (for 4000 level and above): ____________________________ Date: ____________

College Contact: ________________________________________ (Please print name.)

College Contact E-mail: ____________________________
Justification:

- Currently, some freshmen in ECE switch majors before they take any electrical and computer engineering course. They get their first exposure to any electrical and computer engineering course at their sophomore year. An early engagement will help retention in the EE and EEC curricula. The course will expose freshmen to what they will be learning and doing as juniors, seniors, and on the job.
- Many universities have implemented a first year engineering course.
- Currently, the LSU College of Engineering offers an elective, ENG 1050 with a capacity of 75 students. The proposed course EE J810 will present some of the concepts in ENG 1050 along with many other which are specifically relevant to electrical and computer engineering students.
- Students will be introduced to the concept of design, as well as soft skills required for engineering including ethics, communication, and team building, which are typical ABET student (learning) outcomes.

Prepared by: Suresh Rai

March 16, 2012
EE 1810 - Introduction to Engineering: Electrical and Computer Engineering

Catalog Data: EE 1810 Introduction to Engineering: Electrical and Computer Engineering (2)  
Pass/Fail grading, Survey of engineering concepts with specific focus on electrical and computer engineering discipline.

Schedule: 2 credit hours per week

Textbook: None

Prerequisite by Topic: None

Goals/Instructional Objectives:

- Develop concepts in engineering with discussions of skills necessary for success in engineering profession.
- Introduce the student to the wide spectrum of activities in the Electrical and Computer Engineering (ECE) profession - showing both the current global scope of the discipline and the work that is actively pursued by the ECE department. The student will learn the role of ECE in addressing global problems faced by society and the interesting challenges that will need to be confronted.
- Expose students to the engineering design/build/test process and the importance of technical communication through a first year hands-on team based project or projects.

Course Learning Outcomes:

At the end of the course the students should be able to:

1. Understand basic skills needed to succeed in an engineering profession.
2. Understand and appreciate the role of Electrical and Computer Engineering in addressing society's problems and in impacting lives.
3. Have a better comprehension of the ECE programs and career options within the ECE discipline

Content/Topics: Overview of Electrical and Computer Engineering including issues, impact, and current research in these programs. Teamwork, planning, and execution of ECE based experiments. Patent law, societal impact, professional ethics, and time management

Grading Criterion: The final grade will be based on assignments, projects, homework and a final exam. This course will incorporate a collaborative learning pedagogy, which requires the student to attend class regularly for participation points on related assessments. These assessments can be counted as participation, quizzes, projects, and in-class assignments.
Expected Performance Criteria:

(a) Participation (not including attendance) – 25%
(b) Assignments/Projects – 40%
(c) Quizzes and Final examination – 20% + 15%

Grading Scale: Pass/Fail
EE 1810 - Introduction to Engineering: Electrical and Computer Engineering

14 Week Outline

Catalog Data: EE 1810 Introduction to Engineering: Electrical and Computer Engineering (2)
Pass/Fail grading, Survey of engineering concepts with specific focus on electrical and computer engineering discipline.

This course meets for one hour twice per week for a total of two hours per week. Students will meet to learn engineering professional skills with students in ENGR 1050 for one of the sessions, and will meet with ECE faculty to learn topics related to the introduction of electrical and computer engineering.

<table>
<thead>
<tr>
<th>Week #</th>
<th>ECE</th>
<th>Professional Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review Syllabus</td>
<td>Course Information, Admin &amp; Policies</td>
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<tr>
<td></td>
<td>• Explain collaboration with ENGR 1050</td>
<td>Introduction to the Engineering Profession</td>
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<tr>
<td></td>
<td>• Introduce semester project</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Semester Project Guidelines</td>
<td>Introduction to Engineering Design, Dr. Warren Waggenspack</td>
</tr>
<tr>
<td></td>
<td>• Rubric</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Create Teams</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The Design/Build/Test Process part 1</td>
<td>Center for Academic Success Presentation</td>
</tr>
<tr>
<td>4</td>
<td>The Design/Build/Test Process part 2</td>
<td>Engineering Ethics</td>
</tr>
<tr>
<td>6</td>
<td>Patents and Intellectual Property</td>
<td>Career Services Presentation: Resume Discussion, CAREERS@GEAUX</td>
</tr>
<tr>
<td>7</td>
<td>Midterm Project Presentations and Peer Review</td>
<td>College of Engineering office of diversity Pre-Networking Event</td>
</tr>
<tr>
<td>8</td>
<td>Introduction to Careers and Research (ICR) in Electronics</td>
<td>Rework Resumes</td>
</tr>
<tr>
<td>9</td>
<td>ICR in Power Systems, Generation, Distribution, Protection and Control</td>
<td>Academic Planning for Spring/Summer</td>
</tr>
<tr>
<td>10</td>
<td>ICR in Computer Engineering</td>
<td>Student Organization Info Session</td>
</tr>
<tr>
<td>11</td>
<td>ICR in Control Systems and Digital Signal Processing and</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>ICR in Communications</td>
<td>Going Global: Engineering in Global Economy</td>
</tr>
<tr>
<td>13</td>
<td>Competition Day 1</td>
<td>Competition Day 2</td>
</tr>
<tr>
<td>14</td>
<td>Final Design Presentations and Peer Review</td>
<td>Final Design Presentations and Peer Review</td>
</tr>
</tbody>
</table>
Anna M Castrillo

From: John D Scalzo
Sent: Tuesday, October 02, 2012 10:21 AM
To: Anna M Castrillo
Cc: Suresh Rai; Pratul K Ajmera
Subject: RE: Question concerning EE 1810
Attachments: EE1810 oct 2 2012.docx

Anna,

The ECE committee assigned to developing assessments for EE 1810 is still working on the specifics, but here is what we have in mind:

EE 1810 will incorporate a pedagogy of engagement. This will include a number of collaborative and project based assessments. There are many different ways to assess participation using these learning strategies. Without getting too much into the specifics, here are a few:

1.) Mini-papers
2.) Collaborative Learning Exercises
3.) Clickers
4.) Think-Pair-Share activities
5.) In class team projects and presentations
6.) Engineering design notebook logs, similar to what they will be required to do later in their senior design courses (EE 4810, 4820). This notebook will include a log of activities completed in class. The notebook is collected periodically for grading.

I incorporate these assessments into every one of my courses now, almost every time the class meets. The assessment can be graded on its content, or it can be graded simply based on a student’s participation. I have been doing this for many years, and it is quite easy to implement. I have done it for class sizes ranging up to 70, but the techniques are designed for classes in the hundreds. Grading content takes longer, but seeing that a student participated by simply turning it in is very easy. I can choose to do either. ENGR 1050, the introduction to engineering course offered for students who have not yet decided on a major incorporates many of these same techniques.

On the syllabus, I will add this statement to the grading criterion:

This course will incorporate a collaborative learning pedagogy, which requires the student to attend class regularly for participation points on related assessments. These assessments can be counted as participation, quizzes, projects, and in-class assignments.

John Scalzo

From: Anna M Castrillo
Sent: Tuesday, October 02, 2012 8:26 AM
To: John D Scalzo
Subject: Question concerning EE 1810

Dr. Scalzo,
Anna M Castrillo

From: John D Scalzo  
Sent: Friday, September 28, 2012 10:18 AM  
To: Anna M Castrillo  
Cc: Suresh Rai, Pratul K Ajmera  
Subject: ECE Curricula additional items  
Attachments: PACKET 3.pdf

Anna,

Here are the 11 items + 1 Math item that you requested.

As I mentioned over the phone, the EE 1810 Planning Committee is working on a more detailed grading criteria and list of assignments for the course. This will be completed by the end of the semester. There are many ECE programs around the country that have introduced a similar course to this. We will continue to research these courses to see what works best for us. The current outline I included is based on said courses.

John Scalzo  
Louisiana State University  
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Division of Electrical and Computer Engineering  
School of Electrical Engineering and Computer Science  
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jscalzo1@lsu.edu  
225-578-5478

LSU
REQUEST FOR ADDITION OF NEW COURSE

Department: Electrical and Computer Engineering  Date: 3/15/12
College: Engineering

PROPOSED COURSE
Rubric & No.: EE 2740  Title: Digital Logic

COURSE CREDIT
Graduate Credit: YES  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: YES  NO
Grading System: Letter Grade  Pass/Fail

COURSE TYPE
Check one type: LEC  LAB  LEC/LAB  SEM  CLIN/PRACT  RES/IND
Maximum enrollment per section: 150
Total weekly contact hours: 3

CATALOG TEXT
2740 Digital Logic (3) Prereq.: Math 1550. Boolean algebra; logic gates; minimization methods; analysis and synthesis of combinational and sequential logic circuits; design examples; practical impact of design choices.

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

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  3/15/12
College Faculty Approval  4/18/12
Department Chair's Signature  4/12/2012
College Dean's Signature  10/2/2012
Graduate Dean's Signature (for 4000 level and above)  (date)
Chair, FS C&C Committee  (date)
Academic Affairs Approval  9/8/12
Course Justification

Proposed EE 2740 — “Digital Logic”

Digital logic is a very basic course that is usually offered by every EE and EEC department in U.S.A. and other countries. Currently, we offer digital logic in two separate courses, EE 2720 and EE 2730, that individually deal with two, not entirely independent, branches of the area. The proposed course, EE 2740, merges material from both EE 2720 and EE 2730. This new course will offer a more seamless coverage of the fundamental elements of digital logic.

EE 2720 and EE 2730 were each two credit hour courses, while EE 2740 is a three credit hour course. The material not present in the new course is mostly on the topics of programmable logic devices and hardware description languages. The newly proposed course EE 4755, “Digital Design using Hardware Description Languages,” will pick up and greatly extend coverage of hardware description languages in the curriculum.

This class is expected to be offered every semester.

Prepared by: Alexander Skavantzos, Gabriel DeSouza and Ramachandran Vaidyanathan
February 23, 2012
EE 2740 – Digital Logic

Catalog Data: EE 2740 Digital Logic (3) Prereq.: Math 1550. Boolean algebra; logic gates; minimization methods; analysis and synthesis of combinational and sequential logic circuits; design examples; practical impact of design choices.

Prerequisites by Topic:
1. Analytic Geometry and Calculus - Math 1550 to ensure analytical maturity.


Goals/Instructional Objectives:
This course is intended to provide the student with a basic knowledge of binary number systems, Boolean algebra, logic gates, minimization methods, basic knowledge of combinational circuits design and analysis, and basic knowledge of sequential circuits design and analysis. It is to educate students to be able to (1) understand and be capable of analyzing combinational logic circuits, (2) understand and be capable of designing combinational logic circuits, (3) understand the function and the use of standard components, such as decoders, multiplexers, adders, etc, (4) understand and be capable of analyzing sequential circuits, (5) understand and be capable of designing sequential circuits, and (6) understand the function and the use of standard sequential components, such as latches, flip-flops, registers, counters, and shift registers. The course is also designed to prepare the student for more advanced courses in hardware design.

Course Learning Outcomes:
At the end of the course, the student should be able to:
• Understand binary numbers systems and Boolean algebra.
• Analyze and simplify Boolean functions and combinational logic circuits.
• Design a combinational logic circuit.
• Explain the function of multiplexers, decoders, adders, and design/analyze with these components.
• Derive/estimate timing characteristics, such as propagation delay of a combinational logic circuit.
• Explain the function of standard latches and flip flops.
• Analyze a synchronous sequential circuit and specify its behavior by a state table/diagram.
• Analyze an asynchronous sequential circuit and specify its behavior by a state table/diagram.
• Design a sequential circuit.
• Explain the function of registers, counters and shift registers, and design/analyze with these components.
Expected Performance Criteria:
1. Homework assignments: 10%.
2. Exams: 50%.
3. Comprehensive final exam: 30%.
4. Quizzes 10%

Grading Scale:
- A ≥ 90
- B ≥ 80
- C ≥ 70
- D ≥ 60
- F < 60

Topics:
1. Numbers systems, binary numbers, binary arithmetic, character representation and codes. (3 classes)
2. Boolean algebra (2 classes).
3. Logic gates (2 classes).
4. Representation of Boolean functions (2 classes).
5. Minimization methods (3 classes).
6. Analysis of combinational logic circuits (2 classes).
7. Design of combinational logic circuits (5 classes).
8. Latches and flip-flops: types, timing, triggering methods (5 classes)
9. Sequential circuit analysis (4 classes).
10. Sequential circuit design (7 classes).
11. Registers and counters (5 classes).
12. Exams (2 classes).

Schedule: 3 hrs. lecture/week

Contribution of Course to Satisfying the ABET Curriculum Criterion:
Engineering Science: 1.5 credit or 50%
Engineering Design: 1.5 credit or 50%

Prepared by: Gabriel A. de Souza          Date: Spring 2012
Alexander Skavantzos
Ramachandran Vaidyanathan
Items 5 and 10

The email response from MATH is on the next page.

Note that the actual approval from MATH is located in the subject line of the email from Charles Delzell
Dear John: Math OK re EE 4745 & 2740. --Sincerely, Chip Delzell, Math Assoc. Chair

Subject: EEC and EE proposals URGENT
From: "John D Scalzo" <scalzo@lsu.edu>
Date: Wed, September 26, 2012 4:20 pm
To: "delzell@math.lsu.edu" <delzell@math.lsu.edu>

Chip,

Here are a few simple items the University C&C has requested for the submission of our curriculum. For these, I only need an email from you that Math supports these changes:

1. EE 4745: We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.

   Rationale: EE 2810 is now the prerequisite for EE 4745.
   EE 2810 requires credit or registration in EE 2130, and EE 2130 already has MATH 2090 as a prerequisite.

2. EE 2740: Need a letter of support from MATH to add MATH 1550 as a prerequisite.

   Rationale: EE 2740 replaces EE 2720 in the curriculum.
   EE 2720 used to have Math 1550 as a prerequisite, so EE 2740 will have it also.

John Scalzo
Louisiana State University
Instructor, Undergraduate Advisor
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scalzo@lsu.edu (mailto:scalzo@lsu.edu)
225-578-5478
REQUEST FOR ADDITION OF NEW COURSE

Department: Electrical and Computer Engineering  Date: 4/3/12
College: 

PROPOSED COURSE
Rubric & No.: EE 2810  Title: Tools in electrical and computer engineering

COURSE CREDIT  Graduate Credit:  YES  x  NO
Semester Hours of Credit: 2  (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

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)

2810 Tools in Electrical and Computer Engineering (2) Prereq.: CSC 1253 and credit or registration in EE 2130 and 2231. Contemporary tools in the area of electrical and computer engineering.

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

ATTACHMENTS  ATTACH THE FOLLOWING TO YOUR PROPOSAL.

APPROVALS  
Department Faculty Approval  4/3/12  (date)
College Faculty Approval  4/18/12  (date)
Department Chair's Signature  4/11/2012  (date)
Graduate Dean's Signature (for 4000 level and above)  (date)
College Contact: 
College Contact E-mail: 

Academic Affairs Approval  (date)
Chair, FS C&C Committee  (date)

EE 2810 ADD Justification:

Many courses in EE devote time to teaching MATLAB applications. EE 3610, a required course in electrical engineering is currently where the students are introduced to MATLAB. There is currently no course in computer engineering where students are exposed to MATLAB. However there are courses EE 4780 and 4745 which use MATLAB. Other courses that require a proficiency in MATLAB are EE 3350, 4422, 4490, and 4625. Time is taken away from course content to teach basic MATLAB. EE 2810 will provide students with a background using MATLAB. The MATLAB applications will be specific to electrical and computer engineering.

In addition to MATLAB, students will also learn how to use Simulation Program with Integrated Circuit Emphasis, commonly known as SPICE. Courses that use PSpICE are EE 3220, 3221 and EE 4810 and 4820. This program is an open source analog electronic circuit simulator. As a corequisite to EE 2230 and 2130 (required for both electrical and computer engineering) students will be able to simulate basic circuits and devices they will analyze in these courses. Currently there is no course to provide introductory material on these topics.

The third CAD package students will learn in this course is printed circuit board design. Students will learn how to design and lay out a circuit board using conductive pathways and connections etched into a non-conductive substrate. Electrical and computer engineering students will be required to use the knowledge gained from this class to build PCB designs in their senior projects.

Over the past several years, students providing feedback in meetings and graduating seniors during exit interviews have strongly recommended a course such as this.

ABET, the accreditation organization for engineering, requires that students have the “ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.” This course will address that student (learning) outcome.

This class will not duplicate any other course.

Prerequisites:

EE 2810 is a prerequisite for EE 3160, 3610, 3530, 4745, 4780

Credit or registration:

Credit and CSC 1253 and registration in EE 2231 and 2130 is required to take this class.
EE 2810 – Tools in Electrical and Computer Engineering

Catalog Data: EE 2810 Tools in Electrical and Computer Engineering (2) Prereq.: CSC 1253 and credit or registration in EE 2130 and 2231. Contemporary tools in the area of electrical and computer engineering.

Schedule: 2 lectures/week; 50 minutes each

Prerequisite by Topic: Linear circuits, Linear algebra, elements of programming


Goals/Instructional Objectives: This course is intended to provide students with a basic knowledge of contemporary software tools such as PSpice and Matlab to solve problems and for analysis and design in the field of electrical and computer engineering. Specifically, students will understand and learn how to apply these tools for different applications. The course will prepare students for more advanced courses in the EE and EEC programs that use these tools.

Course Learning Outcomes: At the end of the course, the students will be able to:

(a) Matlab based graphics, functions, time responses
(b) Write programs in Matlab in various settings - typical to electrical and computer engineering applications
(c) Advanced topics such as GUIs and Simulink
(d) Analyze dc, steady - state ac and transient response of linear circuits using PSpice
(e) Analyze circuits in the time domain and frequency domain using PSpice

Topics: See attachment A

Expected Performance Criteria:

(a) Homework (based on tools) – 15%
(b) Lab exercises/projects – 40%
(c) Midterm tests/quizzes and final examination – 15% + 10% + 20%

Grading Scale: A (>= 90), B (>= 80), C (>= 70), D (>= 60), F (< 60)

Contribution of Course to Satisfying the ABET Curriculum Criterion:

Engineering Science: 2 credit

Prepared by: Suresh Rai on behalf of CC committee
Attachment A - Topics
EE 2810 Tools in Electrical and Computer Engineering

(a) Topics in Matlab (Approved by Systems Group)

(i) (16 lectures on following material)
Matrices, Arrays and their mathematics
Graphics – Plotting 2D, 3D; Plot labels, log, semilog; sub plots
Programming - .m files; Matlab functions
Vectors – vector algebra (convolution)
Creating Functions – Traditional functions, inline functions
Linear algebra – matrices
Complex numbers – Complex vectors, Mag(), angle() functions
Complex models – Tf, zpk, ilmmodels
Time responses – Step, impulse, initial, lsim, itview
Solving transforms using Matlab – Residue (partial function expansion); Tf2pz should be
tf2zp; Pz2tf should be pz2tf; Bode plots, bode, sisotool
Importing data into Matlab using .csv files and the csvread() function

(ii) (3 lectures)
Advanced topics – GUIs, Simulink (Examples from Electrical and Computer Engineering)

(iii) (Test - 1)

(b) Topics in PSpice and PCB Design (Approved by Electronics Area)

PSpice (6 lectures, 1 Test)

• Introduction: Description of SPICE, Types of SPICE, Types of Analysis, Limitations of SPICE
  Circuit Description: Introduction, Element Values, Nodes, Circuit Elements, Sources, Types of Analysis, Output Variables, PSpice Output Commands, Format of Circuit Files, format of Output Files, Examples of PSpice simulations, Graphical Input Files
• D.C. Circuit Analysis: Introduction, Resistors, Modeling of Elements, Operating Temperature, Independent Sources, Dependent Sources, DC Output Variables, Types of Output, Types of DC Analysis, Examples of PSpice Simulations
• Transient Analysis: Introduction, Capacitors, Inductors, Diodes, and Transistors, Modeling of Transient Sources, Transient Sources; transient Output Variables, Transient Output Commands, Transient response, Switches (Voltage-Controlled Switch, Current-Controlled Switch), Examples of PSpice Simulations
• A.C. Circuit Analysis: Introduction, AC Output Variables, Independent AC Sources, Magnetic Elements, Transmission Lines, Multiple Analysis, Examples of PSpice Simulations
• Circuit Simulations Using PSpice for DC and Transient Analysis during class hours with remote login to PSpice.
• Circuit Simulations Using PSpice for AC Circuit Analysis during class hours with remote login to PSpice.
Interfacing Spice to Matlab

Printed Circuit Board Design (4 lectures, 2 lecture/project, 1 Test)
• Getting started with OrCAD Capture, Building a simple schematic, Processing a design
• Building a multi-sheet schematic, Editing properties
• Creating parts and symbols, Building a hierarchical design
• Preparing a design for Layout
• (lecture/project) Circuit assembly on a PCB design using PCB boards and soldering iron
• (lecture/project) Circuit assembly on a PCB design using PCB boards and soldering iron.
Hi John,

The Division of Computer Science and Engineering acknowledges the changes to the prerequisite list for both EE 3752 and 2810. We have no objections.

Regards,
Coretta

Coretta Douglas, Ph.D., Computer Science
Undergraduate/Instructional Coordinator and Instructor
School of Electrical Engineering and Computer Science
** Computer Science and Engineering **
Patrick Taylor #3170

On Wed, 26 Sep 2012 21:07:08 +0000, John D Scalzo wrote
> Coretta,
> 
> Can you please confirm that CSC is ok with the following changes to our EE and EEC curriculum?
> 
> EE 3752- need a letter of support from CSC to add CSC 1253 as a prerequisite.
> 
> EE 2810- need a letter of support from CSC to add 1253 as a prerequisite.
> 
> John,
> 
> From: Anna M Castrillo
> Sent: Wednesday, September 26, 2012 1:42 PM
> To: John D Scalzo
> Cc: Lisa K Launey
> Subject: EEC and EE proposals URGENT
> Importance: High
> 
> Dr. Scalzo,
> 
> I have reviewed the EEC and EE proposals. Most of it was quite nicely done. I have combined the two packets by redoing the EEC and EE curricula to add the 3150 change. I have also changed the flowchart to show 3150 instead of 3140 and added verbiage to the justifications stating the reasoning for the addition of 3150, which is to replace 3140 due to ten year inactivity.

> However, there are a few issues I believe the committee will address. If you can get these into me before Friday morning, we have a better chance of an approval outright. Also, I would advise coming to the meeting for Committee questions or concerns. This also gives a higher chance of approval if the committee can get answers at the meeting. The next meeting is October 2nd from 2:15-4:15 in 129 Himes Hall.

> 1. Are the Breadth Electives the same for EE and EEC?
> 2. For the Computer Engineering Curriculum, the justification does not point out why EE 3220 and 3221 were dropped from the curriculum. I assume it is because they have been moved to the breadth electives. But the Committee will want to know that.
> 3. Same for Electrical Engineering but also add reasoning for dropping EE 3410 and 3530.
> 4. I do not see the Computer Science paperwork. They said in March of this year that they had completed the paperwork. (I saw
this in the email.) Please note that the proposals that are affected by CSC’s ability to submit paperwork to me will cause them to be either conditionally approved or returned.

5. EE 4745- We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.

6. EE 3710- The justification needs to explain the choice of prerequisites. The Committee will want to know why these courses complement the course.

7. EE 4755- Explain choice of prerequisites.

8. EE 3752- Need a letter of support from CSC to add CSC 1253 as a prerequisite. (I just need an email).

9. EE 2810- Need a letter of support from CSC to add 1253 as a prerequisite.

10. EE 2740- Need a letter of support from MATH to add MATH 1550 as a prerequisite.

11. EE 1810- We will need a 14 week outline for the syllabus

Sincerely,

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

Department: Electrical and Computer Engineering  Date: 3/15/12
College: Engineering

PROPOSED COURSE
Short Title: COMMUNICATIONS IN COMPUTING
Rubric & No.: EE 3710  Title: Communications in Computing

COURSE CREDIT
Graduate Credit: YES X 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:

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
Check one type: X LEC ___ LAB ___ LEC/LAB ___ SEM ___ CLIN/PRACT ___ RES/ND
Maximum enrollment per section: 50  (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)
3710 Communications in Computing (3) Prereq.: EE 2740 and co-req.: EE 3150 or equivalent. Theoretical and practical factors in designing computer communications networks; communication principles and codes; network topology and architecture; protocol layers; security; current and advanced applications.

BUDGET IMPACT
Will additional space, equipment, special library materials or other major expense be involved? ___ YES X NO
(If answer to other 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  3/15/12  College Faculty Approval  4/18/12
Department Chair's Signature  4/12/2012  College Dean's Signature  4/20/12
Graduate Dean's Signature (for 4000 level and above)  (date)  Chair, FS C&C Committee  (date)

Academic Affairs Approval  (date)
Justification for EE 3710 Communications in Computing

For last 25+ years, "EE 4710 Communications in Computing" was offered at the senior level. We are now changing to offer it at the junior level as "EE 3710 Communications in Computing." The reason for this change is as follows:

(a) Communications in computing has become a more fundamental topic today than it was about 25+ years ago, when EE 4710 was introduced at the senior level. Moving this course to the junior level (as EE 3710) will provide a timely experience on basic material on which several modern topics (such as cloud computing and mobile networks) and senior courses build.

(b) The material taught in EE 3710 is at the junior level in terms of detail and depth.

(c) As in the case of EE 4710, the new course EE 3710 complements and does not duplicate CSC 4501 and CSC 4601. Further, the proposed course offers a fundamental coverage of the area, which will act as a stepping stone for students to take advanced courses on the topic.
Item # 6 - EE 3710- the justification needs to explain the choice of prerequisites. The Committee will want to know why these courses complement the course.

EE 3710 (Communications in Computing) has EE 2740 (Digital Logic) and EE 3150 (Probability for Electrical and Computer Engineers) as prerequisites. Both prerequisite courses are essential and impart an understanding of basic material on which EE 3710 builds. EE 2740 is a first course on digital logic, covering digital representation of data and basics of digital hardware (including design tradeoffs). These ideas are required to fully understand and appreciate much of the physical layer coverage of EE 3710. EE 3150 is an introduction to probability with an ECE flavor. It provides the mathematical basics needed to understand error and traffic analysis covered in several contexts within EE 3710.
Justification
EE 3140 was dropped, and replaced with EE 3150 in the catalog.

Curricula
EE 3710 is required in Computer Engineering

Prerequisites
EE 3710 is a prerequisite for EE 7770
EE 3710 — Communications in Computing

Catalog Data:  EE 3710 Communications in Computing (3)  Prereq.: EE 2740 and co-req.: EE 3150 or equivalent. Theoretical and practical factors in designing computer communications networks; communication principles and codes; network topology and architecture; protocol layers; security; current and advanced applications.

Schedule:  3 lectures/week of 50 minutes each

Prerequisites by Topic:
1. Boolean algebra
2. Probability theory


Goals/Instructional Objectives:
This course provides a basic knowledge of computer networking, including layered architectures, protocols and algorithms, security. The course is also designed to teach the foundational concepts from which the student can move to advanced ideas in the area.

Course Learning Outcomes:
At the end of the course, the student should be able to:
• Explain the function of various blocks of the OSI model and major components of the TCP/IP protocol stack
• Explain basic ideas of digital communication, including multiplexing, signal-to-noise ratio, repeaters and regenerators, and speed/reliability/bandwidth tradeoffs
• Understand the capability and limitations of error detection and correction codes, including polynomial codes
• Design ARQ schemes and sliding window protocols to suit a given set of parameters (such a communication delay, data rate, error probability etc.)
• Explain framing, flow control and timing recovery in synchronous services
• Analyze the performance of medium access control protocols
• Explain IP addressing and routing
• Understand key elements of the Ethernet, IP, TCP, and Security

Expected Performance Criteria:
1. Quizzes (15%)
2. Midterm Test(s) (30%)
3. Homework (15%)
4. Final Examination (40%)

Grading Scale:
Letter grades will be assigned as follows:
A (>= 90); B (>= 80); C (>= 70); D (>= 60); F (below 60)
Topics:
1. Communication network architecture (evolution and services), OSI model, TCP/IP protocol stack (3 classes)
2. Basics of communications in computing, digital representation of information, data rate and bandwidth, line coding, signal to noise ratio, channel capacity, multiplexing wired and wireless transmission, repeaters and regenerators (8 classes)
3. Error detection and correction, polynomial codes (3 classes)
4. ARQ schemes and sliding window protocols, delay bandwidth product, transmission efficiency, TCP data transfer (9 classes)
5. Data link layer, Framing, Flow control (3 classes)
6. Medium access control protocols, random access methods, CSMA-CD, Ethernet, scheduling and polling, channelization, CDMA (5 classes)
7. Network layer basics, routing, traffic management, congestion control (3 classes)
8. Internet protocol, address resolution, routing, fragmentation and reassembly, Security (6 classes)
9. Tests and quizzes (2 classes)

Contribution of Course to Satisfying ABET Curriculum Criterion:
Engineering Science: 2 credit
Engineering Design: 1 credit

Prepared by: Ramachandran Vaidyanathan/Suresh Rai Date: Spring 2012
REQUEST FOR ADDITION OF NEW COURSE

Department: Electrical and Computer Engineering Date: 3/15/12
College:__________________________

PROPOSED COURSE
Rubric & No.: EE 3752 Title: Microprocessor Systems

COURSE CREDIT
Graduate Credit: __YES__ x NO (complete for 4000 level courses only)
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: x Letter Grade Pass/Fail

COURSE TYPE
Check one type: LEC LAB X LEC/LAB SEM __ CLIN /PRACT ___ RES/IND
Maximum enrollment per section: 75 (use integer, e.g. 25 not 20-30)
Total weekly contact hours: 4
(If lecture/lab, contact hours of: 2 Lecture 2 Lab)

CATALOG TEXT
3752 Microprocessor Systems (3) Prereq.: CSC 1253 and EE 2740. 2 hrs. lecture; 2 hrs. lab. Theory and design of microprocessors; semiconductor technologies, architectures, assembly language, software development, input/output design, applications, and interfacing.

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 3/15/12
Department Chair's Signature __________________________ Date: 4/12/2012

College Faculty Approval 4/18/12
Chair, FS C&C Committee __________________________ Date: 10/1/2012

Graduate Dean's Signature (for 4000 level and above) __________________________ Date: ________
Course Justification

Proposed EE 3752 — “Microprocessor Systems”

The proposed EE 3752 combines the current EE 3750 (lecture only) and EE 3751 (primarily lab with some lecture) into a single lecture/lab course. The courses EE 3750 and 3751 will be dropped. The combined lecture/lab format of EE 3752 will improve on its predecessors as the lab content and lecture content will be mutually reinforcing, unlike the current scheme in which lecture EE 3750 is a prerequisite for lab EE 3751.

Currently, EE 3750 and 3751 are required for both the computer engineering and electrical engineering B.S. curricula. Under the proposed computer engineering curriculum, EE 3752 will be a required course. Under the proposed electrical engineering curriculum, EE 3752 will be a breadth elective.

This class is expected to be offered twice a year.

Prepared by: Jerry Trahan
November 28, 2011
EE 3752 — Microprocessor Systems

Catalog Data: EE 3752 Microprocessor Systems (3) Prereq.: CSC 1253 and EE 2740. 2 hrs. lecture; 2 hrs. lab. Theory and design of microprocessors; semiconductor technologies, architectures, assembly language, software development, input/output design, applications, and interfacing.

Prerequisites by Topic:
1. Boolean algebra
2. High level programming skill

Gabriel A. de Souza, Laboratory Manual for EE 3752 Microprocessor Systems.

Goals/Instructional Objectives:
This course is intended to provide the student with a basic knowledge of microprocessor design and hands-on experience of machine and assembly language programming and basic hardware interfacing of microprocessors. The course is to educate the student to be able to: 1. understand and be capable of designing low-level assembly language programs for a microprocessor; 2. understand and be capable of designing a basic computer system including a microprocessor. The course is also designed to provide a basic understanding of the operation of a microprocessor and assembly language so that the student is prepared for advanced courses in computer hardware and/or software.

Course Learning Outcomes:
At the end of the course, the students should be able to:
• explain the function of the various blocks of microprocessor architecture, calculate addresses, and generate machine code for given assembly language instructions
• create assembly language programs employing arithmetic operations, logical operations, and bit manipulation on individual data elements and arrays of data
• implement the control structures of pseudocode and flow charts in an assembly language instruction sequence
• create procedures and efficiently pass data in and from procedures
• create assembly language instruction sequences to input and output data under program control and in response to interrupt requests
• operate a PC to perform operations such as the setting of breakpoints to troubleshoot the hardware and debug the programs and the verification and modification of both memory and registers
• design hardware and software for a system including a microprocessor, I/O devices, serial and parallel peripheral interfaces, and a programmable interrupt controller
• build and explain the functionality of basic interfacing circuits such as system memory, parallel port interface and interrupt.
Grading:

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<th>Weight</th>
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<tr>
<td>Homework</td>
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<tr>
<td>Lab experiments*</td>
<td>30%</td>
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<tr>
<td>2 Tests</td>
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<tr>
<td>Individual project</td>
<td>10%</td>
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<tr>
<td>Final</td>
<td>20%</td>
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Letter grades will be assigned as follows:

A ($>~90$); B ($>~80$); C ($>~70$); D ($>~60$); F (below 60)

*Grading for the lab experiments will consist of written lab reports and submission of programming code.

Topics for lecture:

1. Introduction to computers and microprocessors (1 class)
2. Microcomputer architecture, registers, arithmetic units, stacks, architecture of the Intel 8086 (2 classes)
3. Microprocessor addressing modes and machine language (2 classes)
4. Introduction to emulator (1 class)
5. Experiment objectives (2 classes)
6. Microprocessor instruction sets and instructions (6 classes)
7. Microprocessor assembler and software development using assembler (1 class)
8. Microprocessor input/output: program-controlled I/O, interrupt I/O, and direct memory access (4 classes)
9. Microprocessor interfacing, memory interfacing, and system bus timing (2 classes)
10. Microprocessor interrupt priority; input/output interfacing; parallel and serial I/O devices (5 classes)
11. Tests (2 classes)

Schedule:

2 lectures/week of 50 minutes each
2 hours lab/week

Contribution of Course to Satisfying the ABET Curriculum Criterion:

- Engineering Science: 2 credits or 67%
- Engineering Design: 1 credit or 33%

Prepared by: Jerry L. Trahan and Gabriel de Souza
Date: February 15, 2012
### EE 3752 schedule

<table>
<thead>
<tr>
<th>week</th>
<th>lecture 1</th>
<th>lecture 2</th>
<th>lab</th>
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<tr>
<td>1</td>
<td>introduction</td>
<td>architecture</td>
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<tr>
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<td>addressing modes</td>
<td>introduce emulator</td>
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<tr>
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<td>assembler</td>
<td>Test 1</td>
<td>lab 5</td>
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<td>interrupts</td>
<td>lab 9</td>
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<tr>
<td>12</td>
<td>interrupts</td>
<td>Test 2</td>
<td>lab 10</td>
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<td>I/O devices</td>
<td>I/O devices</td>
<td>makeup session</td>
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<tr>
<td>14</td>
<td>I/O devices</td>
<td>I/O devices</td>
<td>individual project</td>
</tr>
</tbody>
</table>
Hi John,

The Division of Computer Science and Engineering acknowledges the changes to the prerequisite list for both EE 3752 and 2810. We have no objections.

Regards,

Coretta
Coretta Douglas, Ph.D. Computer Science
Undergraduate/Instructional Coordinator and Instructor
School of Electrical Engineering and Computer Science
** Computer Science and Engineering **
Patrick Taylor #3170

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On Wed, 26 Sep 2012 21:07:08 +0000, John D Scalzo wrote
> Coretta,
> > Can you please confirm that CSC is ok with the following changes to our EE and EEC curriculum?
> >
> > EE 3752- need a letter of support from CSC to add CSC 1253 as a prerequisite.
> >
> > EE 2810- need a letter of support from CSC to add 1253 as a prerequisite.
> >
> >
> From: Anna M Castrillo
> Sent: Wednesday, September 26, 2012 1:42 PM
> To: John D Scalzo
> Cc: Lisa K Launey
> Subject: EEC and EE proposals URGENT
> Importance: High
> >
> > Dr. Scalzo,
> 
> > I have reviewed the EEC and EE proposals. Most of it was quite nicely done. I have combined the two packets by redoing the EEC and EE curricula to add the 3150 change. I have also changed the flowchart to show 3150 instead of 3140 and added verbiage to the justifications stating the reasoning for the addition of 3150, which is to replace 3140 due to ten year inactivity.
> >
> > However, there are a few issues I believe the committee will address. If you can get these into me before Friday morning, we have a better chance of an approval outright. Also, I would advise coming to the meeting for Committee questions or concerns. This also gives a higher chance of approval if the committee can get answers at the meeting. The next meeting is October 2nd from 2:15-4:15 in 129 Himes Hall.
> >
> > 1. Are the Breadth Electives the same for EE and EEC?
> > 2. For the Computer Engineering Curriculum, the justification does not point out why EE 3220 and 3221 were dropped from the curriculum. I assume it is because they have been moved to the breadth electives. But the Committee will want to know that.
> > 3. Same for Electrical Engineering but also add reasoning for dropping EE 3410 and 3530.
> > 4. I do not see the Computer Science paperwork. They said in March of this year that they had completed the paperwork. (I saw
this in the email.) Please note that the proposals that are affected by CSC’s ability to submit paperwork to me will cause them to be either conditionally approved or returned.

5. EE 4745- We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.

6. EE 3710- the justification needs to explain the choice of prerequisites. The Committee will want to know why these courses complement the course.

7. EE 4755- explain choice of prerequisites.
   EE 3752- need a letter of support from CSC to add CSC 1253 as a prerequisite. (I just need an email).
   EE 2810- need a letter of support from CSC to add 1253 as a prerequisite.

8. EE 2740- need a letter of support from MATH to add MATH 1550 as a prerequisite.

9. EE 1810- we will need a 14 week outline for the syllabus

Sincerely,

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

From: John D Scalzo
Sent: Friday, September 28, 2012 1:38 PM
To: Anna M Castrillo
Subject: RE: ECE Curricula additional items

That is question I think I must pose to faculty. However, a similar statement does not exist in the current EE 3750 catalog statement. This is why there would be an example of the lack of reciprocity. I know that if an EE student has 3750 and 3751 and then changes to a CSC major those courses substitute for CSC 3501. However if a CSC student with credit in CSC 3501 switches to computer engineering, they still must take EE 3750 and 3755. This is logical to me because there is some material covered in the EE classes that is critical for future EE courses that is not covered in CSC 3501.

John

From: Anna M Castrillo
Sent: Friday, September 28, 2012 10:32 AM
To: John D Scalzo
Subject: RE: ECE Curricula additional items

I see. Would you like me to add the statement to EE 3752 though?

Anna M Castrillo

From: John D Scalzo
Sent: Friday, September 28, 2012 10:31 AM
To: Anna M Castrillo
Subject: RE: ECE Curricula additional items

I agree. I think it stay since 3750 needs to be taught a few times during the transition. We may have to hold back on dropping any courses from the system until the transition plan implementation is complete.

John

From: Anna M Castrillo
Sent: Friday, September 28, 2012 10:24 AM
To: John D Scalzo
Subject: RE: ECE Curricula additional items

Dr. Scalzo,
I just realized that the CSC 3501 paperwork (even though it has not been approved) is wrong in that EE 3750 is being dropped. They did not do this in the form, but I will take it out for the committee's viewing. However, you may want to let CSC know so that they can fix their proposal before their meeting.

I will also add the statement “Credit will not be given for this course and CSC 3501” to EE 3752 since it is a restricted credit listed in the CSC proposal.

I just wanted to let you know I would be making these edits.

Thanks

Anna (Castrillo)
Coordinator
Office of the University Registrar
Louisiana State University
107 Thomas Boyd Hall
Phone: (225) 578-4111
Fax: (225) 578-5081

From: John D Scalzo
Sent: Friday, September 28, 2012 10:18 AM
To: Anna M Castrillo
Cc: Suresh Rai; Pratul K Ajmera
Subject: ECE Curricula additional items

Anna,

Here are the 11 items + 1 Math item that you requested.

As I mentioned over the phone, the EE 1810 Planning Committee is working on a more detailed grading criteria and list of assignments for the course. This will be completed by the end of the semester. There are many ECE programs around the country that have introduced a similar course to this. We will continue to research these courses to see what works best for us. The current outline I included is based on said courses.

John Scalzo
Louisiana State University
Instructor, Undergraduate Advisor
Division of Electrical and Computer Engineering
School of Electrical Engineering and Computer Science
3172 Patrick F. Taylor Hall
http://www.ece.lsu.edu/scalzo/index.html
jscalzo1@lsu.edu
225-578-5478

LSU
REQUEST FOR **ADDITION** OF NEW COURSE

**Department:** Electrical and Computer Engineering  
**Date:** 3/15/12

**College:**

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**PROPOSED COURSE**

**Short Title:** DIGITAL DESIGN USING HDL

**Rubric & No.:** EE 4755  
**Title:** Languages

**COURSE CREDIT**

Graduate Credit: X YES 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.

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**GRADING**

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

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**CATALOG TEXT**

4755 Digital Design Using Hardware Description Languages (3)  
Prereq: EE 3755 or equivalent.


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**BUDGET IMPACT**

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

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

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**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

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**APPROVALS**

**Department Faculty Approval:** 3/15/12  
**College Faculty Approval:** 4/18/12

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**BUDGET IMPACT**

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

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

---

**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

---

**APPROVALS**

**Department Faculty Approval:** 3/15/12  
**College Faculty Approval:** 4/18/12

---

**BUDGET IMPACT**

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

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

---

**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

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**APPROVALS**

**Department Faculty Approval:** 3/15/12  
**College Faculty Approval:** 4/18/12
Course Justification

Proposed EE 4755—Digital Design using Hardware Description Languages

Digital systems of nearly every size are designed using *Hardware Description Languages (HDLs)* and practicing design engineers use such languages every day. For those reasons they are an essential part of the curriculum. The ECE department currently covers basic HDL topics in several lower-level courses including EE 2720 (Digital Logic 1), EE 2730 (Digital Logic 2), and EE 3755 (Computer Organization). These classes provide some exposure to the material but do not cover it in sufficient depth, not the least because of the time needed for the central subject matter of the respective courses. The courses EE 2720 and EE 2730, which total four credit hours, are being deleted and replaced with EE 2740, a three credit hour course. Much of the reduction in material in moving from four to three hours in these courses is material on HDLs. A dedicated course for this topic would enable sufficient coverage of the language and just as importantly, time for coverage of design techniques using the language. A course along these lines was offered at the senior level a number of times as a special topics course (EE 4702).

Putting the proposed course at the senior level, after students have taken other digital design-related courses, would allow the use of better design examples and would benefit from students' design experience. The course will be required in the proposed undergraduate computer engineering curriculum.

Prepared by: David M. Koppelman           Date: 30 November 2011
To carry out meaningful digital designs in a hardware description language (HDL) students will need sufficient exposure to digital design in prior courses. EE 3755 (Computer Organization), the chosen prerequisite, covers material on the design of arithmetic units and a basic version of a computer's central processing unit, both are of medium complexity (as presented in the course). EE 3755 also provides basic coverage of Verilog, though the emphasis of the material is on understand the functioning of arithmetic and other units. EE 4755 will focus on Verilog and its use in digital design using examples and projects of medium complexity. With EE 3755 as a prerequisite, the time spent in EE 4755 can be spent on, say, how to do an efficient multiplier design, rather than explaining how a multiplier works. For projects, students who took EE 3755 will have been exposed to a variety of medium-scale designs, so they will be in a good position to choose a project using something from EE 3755 as a starting point.
EE 4755—Digital Design using Hardware Description Languages

Catalog Data


Prerequisites by Topic
Logic design, computer organization, programming (C, C++, Java, etc.).

Textbook
Michael D. Ciletti, Advanced Digital Design with the Verilog HDL, Prentice Hall.

Goals/Instructional Objectives
On entering the course students will have been exposed to an HDL (in prior courses) but will not be expected to know enough to carry through even a simple design to completion (synthesis). The course will cover in depth intermediate and advanced features of an HDL, and how those features are used to code designs of medium complexity. Such designs include a floating-point arithmetic unit, a CPU integer pipeline, or a GPU rasterization engine. The designs will be chosen based both on their complexity and on their relationship to other material in the curriculum. Students will also learn about synthesis and the relationship between their designs and the synthesized result. By the end of the course students should be able to complete a design of moderate complexity, making design trade-offs to balance cost and performance guided by data provided by synthesis tools, all of this using the same packages used by industry.

Homework Assignments and Projects
The assigned work will be a mix of short questions and problems (as in traditional homework) and of coding projects. The course outcomes can be met with a series of about four unrelated coding assignments or with a single term coding project in which students submit partially completed designs throughout the semester, culminating in a final submission.

For the coding projects students will use the same EDA tools used in industry. (The tools are routinely made available at low cost to academic institutions through some kind of higher education program, the ECE department has licensed tools through such programs at least since the year 2000.) As with a conventional laboratory course, students will receive hands-on experience with an engineering activity. The EDA tools are installed on ECE computers which students can access in workstation laboratories (with students using the machines any time during lab hours).

Course Learning Outcomes
At the end of the course the student will be able to:

- Use major features of a common HDL to develop HDL structural models, behavioral models, and testbenches.
- Code a design of moderate complexity in an organized manner, following well chosen style guidelines, resulting in a design that is easy to read, less likely to have flaws, and is easy to maintain.
- Run simulation tools to verify a design's functionality.
- Run synthesis tools to verify and tune timing and to prepare a design for fabrication.
Grading

Homework assignments, including HDL coding assignments, 30%; Midterm Exam, 35%; Final Exam, 35%. Homework assignments will be graded 0-10; exams will be graded 0-100. Numeric grade will reflect correctness and completeness of solutions.

These numeric grades will be mapped to a 0-100 range in such a way that a grade of 90 to 100 reflects mastery of material; 80 to 90, competence with material; 70 to 80, partial competence with material; 65 to 70, minimum acceptable competence; otherwise less than 65. Letter grades will be assigned as follows: A, 90-100; B, 80 or to 90; C, 70 to 90; D, 65 to 70; F, less than 65.

Topics

1. EDA Overview: Definitions of typical workflow and tools that are involved. Classes: 3, one at start of semester, other two much later.

2. Structural Descriptions: Representation of logic levels; primitives; expressions; modules. Basic synthesis tool usage. Classes: 6

3. Basic Synthesis Tool Usage: Design targets, timing and area constraints, design tuning. Classes: 9

4. Procedural Language Features: Variables and types, procedural constructs, event queue, etc. Testbench coding. Classes: 9


6. Design Examples: Coverage of design techniques and features through a medium-sized design. Classes: 9

7. Exams and Review: In-class midterm exam, review for midterm and final exams. Classes: 9

Schedule

Three lectures/week of 50 minutes each.

Contribution of Course to Satisfying the ABET Curriculum Criterion

Engineering Science: 1 credit or 33\(\frac{1}{3}\)%.
Engineering Design: 2 credits or 66\(\frac{2}{3}\)%.

Prepared by: David M. Koppelman      Date: 18 February 2012
REQUEST FOR ADDITION OF NEW COURSE

Department: Mechanical & Industrial Engineering
College: Engineering
Date: 8/14/12

PROPOSED COURSE
Rubric & No.: ME 7343
Title: Computation of Fluid flow and Heat Transfer

COURSE CREDIT
Graduate Credit: X YES 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: ME 7823

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

COURSE TYPE
(Indicate hours in the appropriate course type)

<table>
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<th>LEC/SEM</th>
<th>LEC</th>
<th>LAB</th>
<th>LEC/LAB</th>
<th>SEM</th>
<th>CLIN/PRAC</th>
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Maximum enrollment per section: ___

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

7343 Computation of Fluid Flow and Heat Transfer (3) Prereq.: ME3834, 4433 and ME4533, or equivalent. Finite-difference methods for solving equations of fluid motions and energy; computer program used to solve complex problems involving fluid flow, heat transfer and chemical reaction; mathematical models for turbulence, radiation and combustion; their computing implications; application of prediction procedures for practical situations.

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

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 8/13/12 (date)
College Faculty Approval 9/17/12 (date)
Department Chair's Signature 9/25/12 (date)
College Dean's Signature (for 4000 level and above) 10-2-12 (date)
College Contact: ________ (Please print name.)
College Contact E-mail: ________

Academic Affairs Approval (date)
JUSTIFICATION

This course represents a renumbering of ME 7823 Computation of Fluid Flow and Heat Transfer to create a more logical numbering sequence for the Thermal Science graduate curriculum. Material will be incorporated from ME 7843, 7853, and 7863.
Course Objectives and Description:

To introduce the student to basic concepts and techniques in computational heat transfer and fluid dynamics, and to prepare the student for development and application of computer codes for engineering design and scientific research. Gain an overall understanding of theoretical and practical applications of numerical heat transfer and fluid flow. Utilize in-class codes, and commercially available software to analyze practical heat transfer and fluid flow problems. Students must know programming and will be asked to use the theory developed in class to develop codes.

Course Outline/Topics:

Methods of Prediction (Week 1)
Mathematical Description of Physical Phenomena (Week 2)
  Governing Equations
  Nature of Coordinates
Discretization Methods (Week 3)
  Nature of Numerical Methods
  Methods of Deriving the Discretization Equations
Heat Conduction (Week 4, 5, 6)
  Steady State One Dimensional Conduction
  Unsteady One Dimensional Conduction
  Two and Three Dimensional Situations
  Overrelaxation and Underrelaxation
  Geometric Considerations
Convection and Diffusion Calculation of the Flow Field (Week 7, 8, 9, 10)
  Steady One-dimensional Convection and Diffusion
  Discretization Equation for Two Dimensions
  Discretization Equation for Three Dimensions
  False Diffusion
Calculation of the Flow Field (Week 11, 12, 13, 14)
  Special Procedures
  Related Difficulties
  The Staggered Grid
  The Momentum Equation
  The Pressure and Velocity Corrections
  The Pressure Correction Equations
  SIMPLE Algorithm
  Revised Algorithm
**Grading:**

Bi-weekly reports/Homework - 50%
Project Report - 50%
  Mid-semester Presentation
  Final Presentation
A (90-100%), B (80-89%), C (70-79%), D (60-69%) & F (59% and below)

**Key Reference:**
Graduate Fluids Reorganization

The attached package contains a reorganization of the contents of graduate courses in Fluid Mechanics. These changes will modernize the coverage of the subject. One related graduate Heat Transfer course is also changed. These changes reflect improvements in research methodology and current practice in graduate Fluid Mechanics education and also renumber the courses in a logical numbering sequence. In Mechanical Engineering a logical numbering system is used. For instance

\[ \text{ME 7313} \]

- Credit hours
- Sequence number
- Area
- Graduate course

Class to be dropped:
- ME 7853
- ME 7863
- ME 7843
- ME 7823

Courses created:
- ME 7313 will incorporate material from ME 7843, 7853 and 7863.
- ME 7323 will incorporate material from ME 7843, 7853 and 7863.

Course added:
- ME 7333 is added to consolidate and strengthen the teaching of this material. The material has previously been taught sparsely in ME 7843, 7853 and 7863 as needed.

Course renumbered:
- ME 7823 is renumbered as ME 7343.

Course changed:
- ME 7433 is changed to drop a prerequisite because MATH 4016 is no longer offered at LSU.
Dear Anna,

This is a high level graduate course on computational methods, and the course material cannot be adequately tested in an exam. Also, the students will benefit more if they apply the course material in a project by solving a real problem using computers, which cannot be carried out in an exam.

Sorry if this is late.

Dr. Wong,

One of the committee members commented on one of the course syllabi, ME 7343. He says that the proposal states that there is a final exam; however, in the syllabus, there is no mention of a final exam, just a final presentation. If there is to be no final exam, just send me a justification of why there should be no final exam, just a final presentation. Or if there is a final exam, it will need to be added to the syllabus.

Our meeting is today at 2:15. If you can get me this information, it would be very helpful.

Sincerely,

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

LSU
REQUEST FOR ADDITION OF NEW COURSE

Department: Construction Management
College: Engineering
Date: 09/12/11

PROPOSED COURSE
Short Title: CONSTRUCTION SIMULATION
Rubric & No.: CM 7112

COURSE CREDIT
Graduate Credit: X YES 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:

(Catalog Text)

7112 Construction Simulation (3) Prereq.: consent of instructor.
Decision-making using simulation in the planning and scheduling phases in the construction industry and using simulation languages to model construction operations.

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

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.

APPROVALS
Department Faculty Approval 08/20/12
College Faculty Approval 09/12/11
Chair, FS C&C Committee 10/2/12

Academic Affairs Approval 09/18/12
CM 7112 Construction simulation

Was taught for the first time this Spring 2011 as a special topics, enrollment 8 graduate students, will be part of the online courses for our online Master’s program that start January 3rd 2013

CM 7213 Soils in Construction

Is being taught for the first time this fall as a special topics, enrollment 5 graduate students, will be part of the online courses for our online Master’s program that start January 3rd 2013
CM 7112-01 – Construction Simulation

Justification
This course will be offered as part of the CM elective courses for the Masters of Science in CM program (MSCM). It has been successfully offered as a special topics class in the Engineering science graduate program. Students enrolled in this course had construction management and civil engineering background. The faculty expects that this course will also attract students from other disciplines like Architecture.

The CM Department at LSU needs to provide its students with graduate courses after the MSCM program was approved by the BOR to teach future industry professionals how to manage challenges within project control. Furthermore the addition of this course will allow the graduate faculty to enhance their areas of expertise. It will also give the faculty an opportunity to select graduate students interested in working in the area of advanced project control.

Currently there are no courses offered on this subject in the COE at the graduate or undergraduate level, therefore the faculty feels that it would be beneficial to the students to offer course work in this area.
CM7112 - Construction Simulation

Term: TBA
Class Time & Location: TBA, TBA

Faculty: Marwa M Hassan, 3130A PFT Building
Marwa@lsu.edu, 578-9189

Office Hours: TBA

Website: Moodle will be used for course

CATALOG DATA: Decision making using simulation and simulation languages to model construction operations. Simulation of construction process using what-if analysis. Role of simulation and decision making in the planning and scheduling phases in the construction industry. Topics include introduction to discrete event simulation, generation of random numbers, queuing, and simulation languages for construction. Prerequisites: senior or graduate standing; consent of instructor.


Other reading materials: papers & handouts will be given in class.

OPTIONAL TEXTBOOK:

Outcomes:
- Understand the process by which construction operations are designed and optimized.
- Comprehend the role of simulation and decision-making in construction operation design and planning.
- Use proper performance measurement, modeling, simulation and analysis methods to design or improve construction operations.
- Use simulation as a decision-making tool.

Upon completion of the course you will be able to design or improve a construction operation by proper measurement of current performance, and modeling and analysis using computer simulation.

09/10/12
GRADE POLICY: 2 Exams 50%  
Final Exam 25%  
Exercises/HW 5%  
Project 15%  
Class participation 5%

GRADE SCALE:  
A ≥ 90  
B 80 – 89.9999  
C 70 – 79.9999  
D 60 – 69.9999  
F ≤ 59.9999

PREREQUISITES: None

INSTRUCTOR: Dr. Marwa M. Hassan, Assistant Professor  
Office: 3130A PFT  
Phone: 8-9189  
e-mail: Marwa@lsu.edu

MEETING TIME:

SOFTWARE NEEDS:
1. EZStrobe: Simulation software for construction operation modeling  
2. Visio 2000: Required for EZStrobe  
3. Stroboscope: Required for EZStrobe  
4. STATFit: For probability distribution fitting

Course project: (15%)  
This will be a group project. Students are requested to choose an ongoing construction operation, study that operation through observation or recordings then determine the probability distribution for the activities within that operation and model that operation. The students are also required to model alternative methods for carrying that operation.

Participation grade will be based on in class exercises that the students need to solve individually and in groups; the grade will be given for submitting the solution, not for correctness

Department Policies:
1. No make-up exams (excuses for such are defined by the university regulations).
2. 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.
3. In-class participation and questions are encouraged. They may positively influence grading decisions in borderline cases.
4. Academic dishonesty will be dealt with according to university regulations and policy. It is each student’s responsibility to understand these regulations.
5. No food or drinks are allowed in CM 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.

Course Policies:

- All homework is due at the BEGINNING of class time on the due date. LATE HOMEWORK WILL NOT BE ACCEPTED. INDIVIDUAL EFFORT IS EXPECTED FOR ALL ASSIGNMENTS AND ANY INFRINGEMENTS WILL BE STRICTLY DEALT WITH ACCORDING TO UNIVERSITY REGULATIONS.
• Do not be shy to ask even the simplest questions because that is the only way to guarantee an explanation.

• Do not hesitate to contact me regarding any matter pertaining to this course. Especially if you are having a problem with any part of the course or its prerequisite, please bring it to my attention as soon as possible so I can give you the assistance you need.

**Classroom Civility**

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, including the use of cell phones or beepers (please turn them off or on silent before class begins or let me know at the beginning of class if you may have an emergency), excessive tardiness, leaving early, reading newspapers during class (or working Sudoku or crossword puzzles), sleeping, prolonged visiting with other students and making inappropriate or offensive remarks. This is not a comprehensive list – please treat the instructor and other class members with respect.

**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.

**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.

<table>
<thead>
<tr>
<th>Student Contact</th>
<th>Phone Number</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Hassan</td>
<td>/</td>
<td>/</td>
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</table>

09/10/12
# Tentative Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Material Covered</th>
<th>Suggested Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nature of construction operation / modeling concepts</td>
<td>Notes</td>
</tr>
<tr>
<td>2</td>
<td>Modeling concepts / Queing</td>
<td>Notes</td>
</tr>
<tr>
<td>3</td>
<td>Queing / basic simulation concepts</td>
<td>Notes</td>
</tr>
<tr>
<td>4</td>
<td>Process Modeling concepts / Cycle integration</td>
<td>Notes</td>
</tr>
<tr>
<td>5</td>
<td>EZSTROBE / Modeling complex logic</td>
<td>Notes</td>
</tr>
<tr>
<td>6</td>
<td>project data collection meeting time</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Project data collection meeting time</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Valid credible models / basic prob &amp; stat</td>
<td>Ch. 4 &amp; 5</td>
</tr>
<tr>
<td>9</td>
<td>Basic prob &amp; stat</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Probability distribution</td>
<td>Chapter 6, 7, 8</td>
</tr>
<tr>
<td>11</td>
<td>Random number generation</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>random variates</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Spring Break</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Experimental design / output data analysis</td>
<td>Ch 9 &amp; 12</td>
</tr>
</tbody>
</table>

Dr. Hassan  
09/10/12
At their September 18, 2012 meeting, the Faculty Senate Courses and Curriculum Committee took the following action regarding the Construction Management proposal:

CM 7112 and 7213
- The Committee tabled the proposals to add CM 7112 and 7213. Because online courses are a fundamentally new concept for the Courses & Curricula Committee, the Committee requests that a representative from the department attend an upcoming meeting to explain how they will handle the online courses and discuss the online Master's program. The Committee also questioned whether the syllabi should look like in-class standard models if the courses are to be taught online.

The Committee meets again on Tuesday, October 2nd, 2012. All meetings are held at 2:15 in 129 Himes Hall. Please contact Anna Castrillo in the Office of the University Registrar at 8-411 or at acastrl@lsu.edu to confirm your attendance.

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  
**College:** Engineering  
**Date:** 09/12/11

## PROPOSED COURSE

<table>
<thead>
<tr>
<th>Rubric &amp; No.</th>
<th>CM 7213</th>
<th>Title:</th>
<th>SOILS IN CONSTRUCTION</th>
</tr>
</thead>
</table>

### COURSE CREDIT

<table>
<thead>
<tr>
<th>Graduate Credit:</th>
<th>X YES</th>
<th>NO</th>
</tr>
</thead>
</table>

| 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

<table>
<thead>
<tr>
<th>Final Exam:</th>
<th>X YES</th>
<th>NO</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grading System:</th>
<th>X Letter Grade</th>
<th>Pass/Fail</th>
</tr>
</thead>
</table>

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

### COURSE TYPE

<table>
<thead>
<tr>
<th>Check one type:</th>
<th>X LEC</th>
<th>LAB</th>
<th>LEC/LAB</th>
<th>SEM</th>
<th>CLIN/PRACT</th>
<th>RES/IND</th>
</tr>
</thead>
</table>

| 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)

7213 Soils in Construction (3) Prereq.: Consent of instructor. This course is intended to give students an in-depth understanding of geotechnical principals as it applies to soil construction activities.

### 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. 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**

<table>
<thead>
<tr>
<th>Department Faculty Approval</th>
<th>08/20/12</th>
<th>College Faculty Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>08/05/12</td>
<td>9/5/12</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>College Dean's Signature</th>
<th>9/16/12</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Chair, FS C&amp;C Committee</th>
<th>10/2/12</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Academic Affairs Approval</th>
<th>10/8/12</th>
</tr>
</thead>
</table>
CM 7112 Construction simulation

Was taught for the first time this Spring 2011 as a special topics, enrollment 8 graduate students, will be part of the online courses for our online Master’s program that start January 3rd 2013

CM 7213 Soils in Construction

Is being taught for the first time this fall as a special topics, enrollment 5 graduate students, will be part of the online courses for our online Master’s program that start January 3rd 2013
CM 7213-01 – Soils in Construction

Justification
This course will be offered as part of the CM elective courses for the Masters of Science in CM program (MSCM). It is currently being offered as a special topics class in the MSCM graduate program. Students enrolled in this course have construction management background. The faculty expects that this course will also attract students from other disciplines like Architecture.

The CM Department at LSU needs to provide its students with graduate courses after the MSCM program was approved by the BOR to teach future industry professionals how to manage soil construction activities. Furthermore the addition of this course will allow the graduate faculty to enhance their areas of expertise. It will also give the faculty an opportunity to select graduate students interested in working in the area of soil in construction.

Currently there are no courses offered in this area in the CM department at the graduate or undergraduate level, therefore the faculty feels that it would be beneficial to the students to offer course work in this area with emphasis on construction soil activities.
CM 7213-01 – Soils in Construction

TERM : TBA

CLASS TIME & LOCATION : TBA

LOCATION : TBA

FACULTY : Marwa M Hassan 3130A PFT Building
Marwa@lsu.edu 578-9189

OFFICE HOURS : TBA

WEBSITE : Moodle will be used for course contents

CATALOG COURSE DESCRIPTION
CM 7213 – Soils in Construction
7206 Soil Mechanics in Construction (3) Prereq. : This course is intended to give students an in-depth understanding of geotechnical principals as it applies to soil construction activities.

This course is intended to give students an in-depth understanding of geotechnical principals as it applies to soil construction activities. Topics include geological formations of natural soils, soil mineralogy, soil sampling, classification, soil testing, dewatering, safety and sustainability in soil construction, soil contamination and remediation, recycled content used in soil construction and innovative technologies in soil stabilization.

Upon successful completion of this course, the student will be able to:

• Understand concepts related to the soil, subsurface exploration, soil testing, and surface charge.
• Evaluate construction and jobsite safety in soil applications.
• Earthwork and excavation methods.
• Understand sustainable soil construction practices.
• Understand innovative recycling option in soil construction activities.
• Comprehend latest soil stabilization techniques

GRADE POLICY : Project & Presentation 20% GRADE SCALE : A ≥ 90
2 Exams 50%
Final Exam 25%
Class participation 5%
B 80 – 89
C 70 – 79
D 60 – 69
F ≤ 59

Participation grade will be based on in class exercises that the students need to solve individually and in groups; the grade will be given for submitting the solution, not for correctness.
Department Policies:

1. No make-up exams (excuses for such are defined by the university regulations).
2. 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.
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Course Policies:

- All assigned work is due at the BEGINNING of class time on the due date. LATE WORK WILL NOT BE ACCEPTED. INDIVIDUAL EFFORT IS EXPECTED AND ANY INFRINGEMENTS WILL BE STRICTLY DEALT WITH ACCORDING TO UNIVERSITY REGULATIONS.
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Dr. Hassan
<table>
<thead>
<tr>
<th>Week</th>
<th>Material Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Soil formation and mineralogy</td>
</tr>
<tr>
<td></td>
<td>a. Origin of clay minerals</td>
</tr>
<tr>
<td></td>
<td>b. Soil profiles and development</td>
</tr>
<tr>
<td></td>
<td>c. Rock and mineral stability</td>
</tr>
<tr>
<td></td>
<td>d. Interatomic and secondary bonding</td>
</tr>
<tr>
<td>2</td>
<td>Soil composition and engineering properties</td>
</tr>
<tr>
<td></td>
<td>a. Composition and property: Interrelationships</td>
</tr>
<tr>
<td></td>
<td>b. Activity</td>
</tr>
<tr>
<td></td>
<td>c. Engineering properties of clay materials</td>
</tr>
<tr>
<td></td>
<td>d. Effects of organic matter</td>
</tr>
<tr>
<td>3</td>
<td>Subsurface exploration and field testing</td>
</tr>
<tr>
<td></td>
<td>a. Exploration strategy</td>
</tr>
<tr>
<td></td>
<td>b. Soil drilling and sampling</td>
</tr>
<tr>
<td></td>
<td>c. Satellite imagery and geophysical methods</td>
</tr>
<tr>
<td>4</td>
<td>Soil contamination and remediation</td>
</tr>
<tr>
<td></td>
<td>a. Underground contamination</td>
</tr>
<tr>
<td></td>
<td>b. Sanitary landfills</td>
</tr>
<tr>
<td></td>
<td>c. Remediation methods</td>
</tr>
<tr>
<td>5</td>
<td>Earthwork Calculation</td>
</tr>
<tr>
<td></td>
<td>a. Phase Diagrams, Void Rations</td>
</tr>
<tr>
<td></td>
<td>b. Cut and fill calculation</td>
</tr>
<tr>
<td>6</td>
<td>Earthwork in the construction contract</td>
</tr>
<tr>
<td>7</td>
<td>Soil distress mechanisms and failure</td>
</tr>
<tr>
<td></td>
<td>a. Shear failure</td>
</tr>
<tr>
<td></td>
<td>b. Volume change</td>
</tr>
<tr>
<td></td>
<td>c. Slope stability</td>
</tr>
<tr>
<td>8</td>
<td>Innovative techniques in Soil stabilization</td>
</tr>
<tr>
<td></td>
<td>a. Lime stabilization</td>
</tr>
<tr>
<td></td>
<td>b. Cement stabilization</td>
</tr>
<tr>
<td>9</td>
<td>Safety in Soil construction</td>
</tr>
<tr>
<td></td>
<td>a. Trenching and excavation, Excavation support</td>
</tr>
<tr>
<td>10</td>
<td>Sustainability in Soil construction</td>
</tr>
<tr>
<td></td>
<td>a. Heat island effects and mitigation</td>
</tr>
<tr>
<td></td>
<td>b. Stormwater management</td>
</tr>
<tr>
<td></td>
<td>c. Land use issues</td>
</tr>
<tr>
<td>11</td>
<td>Compaction</td>
</tr>
<tr>
<td></td>
<td>a. Methods &amp; Equipment</td>
</tr>
<tr>
<td></td>
<td>b. Soil compaction assessment</td>
</tr>
<tr>
<td></td>
<td>c. Deep Fill</td>
</tr>
<tr>
<td>12</td>
<td>Materials recycling in soil construction (fly ash, steel sag, etc.)</td>
</tr>
<tr>
<td></td>
<td>a. Fly ash</td>
</tr>
<tr>
<td></td>
<td>b. Scrap tire rubber</td>
</tr>
<tr>
<td></td>
<td>c. Waste lime</td>
</tr>
<tr>
<td>13</td>
<td>Excavations and Excavation Supports</td>
</tr>
<tr>
<td></td>
<td>a. Swell and Shrinkage</td>
</tr>
<tr>
<td></td>
<td>b. Mass Diagram</td>
</tr>
<tr>
<td></td>
<td>c. Cofferdam, sheet piling, braced cuts</td>
</tr>
<tr>
<td>14</td>
<td>Dewatering</td>
</tr>
</tbody>
</table>
At their September 18, 2012 meeting, the Faculty Senate Courses and Curriculum Committee took the following action regarding the Construction Management proposal:

**CM 7112 and 7213**

- The Committee tabled the proposals to add CM 7112 and 7213. Because online courses are a fundamentally new concept for the Courses & Curricula Committee, the Committee requests that a representative from the department attend an upcoming meeting to explain how they will handle the online courses and discuss the online Master's program. The Committee also questioned whether the syllabi should look like in-class standard models if the courses are to be taught online.

The Committee meets again on Tuesday, October 2nd, 2012. All meetings are held at 2:15 in 129 Himes Hall. Please contact Anna Castrillo in the Office of the University Registrar at 8-411 or at acastril@lsu.edu to confirm your attendance.

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

From: Sherif S Ishak
Sent: Tuesday, October 02, 2012 5:39 PM
To: Anna M Castrillo
Cc: Marwa M Hassan
Subject: CM 7213

Anna,

This is to let you know that our department approves the new graduate course CM 7213 and the soil mechanics content it covers.

Regards,
Sherif

LSU

Sherif Ishak, Ph.D.
Associate Professor
Undergraduate Program Coordinator
346A Patricke L. Taylor Hall
Civil and Environmental Engineering
Louisiana State University
P.O. Box 9903
Baton Rouge, LA 70803
Phone: 225-934-5626

Personal Website

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

C. S. Lewis
REQUEST FOR ADDITION OF NEW COURSE

Department: Petroleum Engineering Date: 09/12/12

College: Engineering

PROPOSED COURSE

Short Title: Fluid flow and heat transfer in wellbores Rubric & No.: PETE 4084 Title: Fluid flow and heat transfer in wellbores

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: 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 3 CLIN/PRACT RESIND

Maximum enrollment per section: 60 (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)

PETE 4084 Fluid flow and heat transfer in wellbores (3). Prereq.: Math 2065, CE 2200, ME 3333 or consent of instructor. Multiphase flow in pipes and wells; flow pattern description and mechanistic modeling; wellbore heat transfer; case studies.

BUDGET IMPACT

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

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

(If answer to other 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 09/12/12

College Faculty Approval 9/17/12

College Dean's Signature 10/3/12

Chair, FS C&C Committee 10/3/12

College Contact: ___________________________ (Please print name) Academic Affairs Approval __________________ Date: __________________
This course is designed to address flow and heat transfer in and around underground wellbores. Understanding multiphase flow in wellbores is vital to being able to predict or evaluate flow rates from reservoirs and is an area that is currently lacking in our undergraduate curriculum. Having this course in our curriculum will help our students to find jobs in this industry as well as enhance their opportunities as broad-based petroleum engineers after graduation.

Similar courses are offered in the Petroleum Engineering departments of most of the Universities that we compete for students with. Texas A&M University, the University of Oklahoma, the University of Texas, as well as other petroleum engineering programs all have "production engineering" courses in their undergraduate curricula, and all have a short section in those courses which deal with single and multiphase flow in pipes. None of these courses include the heat transfer portion of the course which becomes increasingly important when considering wells in the deep water of the Gulf of Mexico and in complex underground flows such as seen in carbon sequestration and geothermal resource development.

There were 12 students that took the course in Fall, 2008 and there were 10 that took the course in the Fall, 2011. The course has a project associated with it and one of the students from the Fall, 2011 class worked on the effects that circulation of hot fluid and insulating the riser might have had on hydrate formation in the Macondo well blowout. This work was presented at and won the Gulf Coast Regional Society of Petroleum Engineers (SPE) student paper contest and will next be competing in the SPE International paper contest in October. The success of the project reflects that the class is timely and fills a need that our students can utilize in their careers.

We could find no undergraduate course in a search of the LSU catalog where multiphase flow in pipes was described. There are four graduate-level courses on either computational fluid dynamics modeling or multiphase fluid flow in porous media are mentioned. None of these deal with the simplified models that are in wide use in the petroleum industry. The prerequisites for the course are all currently required courses in the Petroleum Engineering degree program so no additional impact on these courses is expected. This course will be on the regular rotation of undergraduate senior elective offerings once approved.

Graduate student projects are expected to be of significantly higher technical content than comparable undergraduate projects. The instructor will be the primary judge of this additional technical content but additional input from other Petroleum Engineering faculty members during the grading process will be sought.
Syllabus

Title: PETE 4084 Fluid Flow & Heat Transfer in Wellbores (Prereq: Math 2065, CE 2200, ME 3333 or consent of instructor.)

Time & Venue: Fall 2011 (Sec. 2: 12:10-1:30 PM, T-Th), PFTH 2142

Instructor: Prof. Mayank Tyagi (email: mtyagi@purdue.edu, phone: 8-6041, Office: 3526A Taylor Hall)
(Office hours: Mondays 10-11 AM or by appointment)

Objective: Purpose of this course is to impart students with the technical skills to:
1) Understand fundamentals of multiphase flow in pipes
2) Understand different aspects of wellbore heat transfer
3) Perform simplified mathematical/numerical analysis of multiphase flow in pipes at arbitrary inclination
4) Perform mathematical modeling and analysis of fluid flow and heat transfer in simple wellbore systems/components

Topics:
1. Multiphase Flow
2. Flow Pattern Description and Mechanistic Modeling
3. Wellbore Heat Transfer
4. Case Study 1: Circulation temperature of mud tank
5. Case Study 2: Heat Transfer in Enhanced Geothermal Systems
6. Case Study 3: Flow analysis in Fractures, Perforations and Completions

Text or Reference Material:
Instructor provided hand outs and slides

Supplemental Reading (Few chapters and assigned problems only):

Exams and Homeworks:
Midterm Exam (15%)
Final exam (30%)
Project: (50%)
Five in-class problems on various topics (1% each = 5%)

Grading Scale: Only the final total score will be curved for grading.
A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 60 > F
Policies:
No make-up exam test. In case student(s) has provided an attested excuse letter, his/her test grade weightage will be adjusted towards final exam and project.

Only written appeals (e-mail is acceptable) for grade issues will be considered.

Students are expected to follow the “Code of Conduct”

The course project requires both a written report (50% of the project grade) due on November 28, and a 20 minute presentation (50% of the project grade) during the week shown on the course schedule below. A list of possible topics will be posted at the beginning of the semester, or you may choose a topic with the approval of the instructor. Students need to do a literature review about their topic sufficient to submit a summary of their proposed project by the seventh week of classes. The written report and the presentation should both have a problem description, literature review, procedure, main results and conclusions. Graduate student projects are expected to be of significantly higher technical content than comparable undergraduate projects. The instructor will be the primary judge of this additional technical content but additional input from other Petroleum Engineering faculty members during the grading process will be sought.

<table>
<thead>
<tr>
<th>Week Number</th>
<th>Tentative Lecture Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Aug 22-26</td>
<td>Multiphase Flow in Pipes</td>
</tr>
<tr>
<td>2 Aug 29-Sep 2</td>
<td>-contd</td>
</tr>
<tr>
<td>3 Sep 5-Sep 9</td>
<td>-contd</td>
</tr>
<tr>
<td>4 Sep 12-Sep 16</td>
<td>Wellbore Heat Transfer</td>
</tr>
<tr>
<td>5 Sep 19-Sep 23</td>
<td>-contd</td>
</tr>
<tr>
<td>6 Sep 26-Sep 30</td>
<td>-contd</td>
</tr>
<tr>
<td>7 Oct 3 – Oct 7</td>
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<tr>
<td>8 Oct 10 – Oct 14</td>
<td>October 13 (Fall Holidays start)</td>
</tr>
<tr>
<td>9 Oct 17 – Oct 21</td>
<td>Case Study 1</td>
</tr>
<tr>
<td>10 Oct 24 – Oct 28</td>
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<tr>
<td>11 Oct 31 – Nov 4</td>
<td>Case Study 2</td>
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<tr>
<td>12 Nov 7 – Nov 11</td>
<td>-contd</td>
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<tr>
<td>13 Nov 14 – Nov 18</td>
<td>Case Study 3</td>
</tr>
<tr>
<td>14 Nov 21 – Nov 25</td>
<td>November 23 (Thanksgiving Holidays start)</td>
</tr>
<tr>
<td>15 Nov 28 – Dec 2</td>
<td>- Project Presentations &amp; Review -</td>
</tr>
<tr>
<td>16 Dec 5 – Dec 9</td>
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<tr>
<td>17 Dec 16</td>
<td>COMMENCEMENT</td>
</tr>
</tbody>
</table>
**REQUEST FOR ADDITION OF NEW COURSE**

Department: Petroleum Engineering
College: Engineering

**PROPOSED COURSE**

Short Title: **UNCONV RESERVOIRS**
Rubric & No.: PETE 4090
Title: Unconventional Reservoirs

**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: **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)

<table>
<thead>
<tr>
<th>LEC/REC</th>
<th>LEC/SEM</th>
<th>3 LEC</th>
<th>LAB</th>
<th>LEC/LAB</th>
<th>SEM</th>
<th>CLIN</th>
<th>PRACT</th>
<th>RES/IND</th>
</tr>
</thead>
</table>

Maximum enrollment per section: **10** (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)

**4090 Unconventional Reservoirs (3)** Prereq.: CE 3400 or consent of instructor. Drilling, completion, production and reservoir evaluation of unconventional reservoirs; case studies.

**BUDGET IMPACT**

If this course is approved, will additional staff be needed? **X** 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 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: 09/12/12
College Faculty Approval: 9/17/12

Department Chair's Signature: 9/14/12
Graduate Dean's Signature (for 4000 level and above): 10/2/12

Chair, FS C&C Committee: 10/2/12
College Dean's Signature: 9/18/12

College Contact: (Please print name) Academic Affairs Approval: 9/19/12
College Contact E-mail:
Justification

This interdisciplinary, team-taught course is designed to prepare students for the drilling, completion, production and evaluation of unconventional reservoirs. Teaching the exploitation of conventional reservoirs has been shown to be effective by teaching discipline-specific courses and having a portion of those courses speak to the ways that the disciplines work together. In addition, many programs have a "capstone" experience where there is an individual course that usually has a single project that covers all of the disciplines taught in the program. Unconventional reservoirs require that all of the disciplines be tightly integrated throughout the reservoir development process. In addition, there are tools and techniques that are unique to the analysis of unconventional reservoirs that are extensions to the classical methods typically taught in standard petroleum engineering courses. Unconventional reservoirs have been credited with reversing the trend of increased oil imports and thus have become an increasingly important topic for petroleum engineering students to learn about. Having this course in our curriculum will help our students to find jobs in this industry as well as enhance their opportunities as broad-based petroleum engineers after graduation.

At this time, the only similar courses that are offered in the Petroleum Engineering departments of most of the Universities that we compete for students with are "special topics" courses similar to the way that LSU has taught this course the past two years. We believe that several other institutions have plans for unconventional reservoir courses but none have gone through the approval process. There are no similar courses at LSU.

There were 33 students that took the course in Spring, 2011 and there were 32 that took the course in the Spring, 2012. The prerequisite for the course is currently a required course in the Petroleum Engineering degree program so no additional impact on CE 3400 is expected. This course will be on the regular rotation of undergraduate senior elective offerings once approved.

Graduate student projects are expected to have higher technical content than comparable undergraduate student projects.
PETE 4090- Unconventional Reservoirs

Main Instructor
Arash Dahi
Department of Petroleum Engineering
Office: Patrick Taylor Hall 3224
e-mail: a_dahi@lsu.edu
Office hours: M- T 11:00 – 12:00.

Meeting
M - W 4:40-6:00 pm
Location: Patrick Taylor Hall 2427

Prerequisite:
Mechanics of Materials (CE 3400)

Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term Exams</td>
<td>35%</td>
</tr>
<tr>
<td>Quiz</td>
<td>5%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Final project</td>
<td>10%</td>
</tr>
</tbody>
</table>

(Graduate student projects are expected to have higher technical content than comparable undergraduate student projects)

Grading Scale
A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 55 > F

Course Description

Unconventional gas reservoir is a term commonly used to refer to a low permeability reservoir that produces mainly dry natural gas. Many of the low permeability reservoirs that have been developed in the past are sandstone, but significant quantities of gas are also produced from low-permeability carbonates, shales, and coalbed methane. As liquid content in these low permeability reservoirs increases, the terms unconventional condensate, unconventional liquid or sometimes shale oil become more prevalent.

The course starts with a general overview of geological and petrophysical properties of these formations. Then due to the significance of natural fractures in economic production from these reservoirs, special attention will be given to natural fractures characterization. After that drilling and completion techniques adopted for these formations will be discussed. In the second part of the course, the emphasis will be on hydraulic fracturing design and collecting data (such as in situ stresses and rock mechanical properties) for a proper fracture design. The course will be finished with an overview of fracture assessment and reserve estimation for the mentioned unconventional resources.

The course project is a written project. Students can do the project in a group of two or individually. A list of possible topics will be posted at the beginning of the semester, or the student(s) may choose a topic with the approval of the instructor. Students need to do a literature review about their topic sufficient to submit an abstract summary of their proposed project by the seventh week of classes. The final report is due on the last class day and contains the problem description, literature review, some basic engineering calculations, simulation results, details of the proposed design (if applicable) and conclusions.
University Policies

The Louisiana State University provides upon request appropriate adjustments for qualified students with disabilities. For more information, contact the Office of the Dean of the College of Engineering.

Scholastic dishonesty will not be tolerated and incidents of dishonesty will be reported.

References
Several SPE and AAPG papers (will be posted later)
Handouts (Distributed only during the lectures)
API Guideline (Will be posted on Moodle)

Textbook

Recommended Reading Material
Mechanics of Hydraulic Fracturing, Yew, Gulf Professional Publishing
Hydraulic Fracture Mechanics, Peter Valko, Michael J. Economides
<table>
<thead>
<tr>
<th>Week</th>
<th>Subject</th>
</tr>
</thead>
</table>
| 1    | Introduction  
Geology of Unconventional reservoirs |
| 2    | Geology of Unconventional reservoirs  
Petrophysical properties - Formation Evaluation |
| 3    | Drilling systems (drillstring, tools) methods & application  
Geosteering (Guest lecturer) |
| 4    | Torque and drag & Hole cleaning  
Natural fractures and their role in UGR recovery |
| 5    | Stress, Strain and Deformation (Review)  
Rock Mechanics and Elasticity principles |
| 6    | In situ stress and rock mechanical properties  
Midterm Exam |
| 7    | Earth Stresses, Leakoff Test, Extended LOT  
Intro. to hydraulic fracturing treatment |
| 8    | Into. to Mechanics of Fracture  
Hydraulic Fracture Geometry |
| 9    | Reserve Estimation in UGS  
Reserve Estimation in UGS |
| 10   | Hydraulic Fracture Geometry (continues ...)  
Fracture height prediction,Near wellbore issues |
| 11   | Fracture Diagnostics  
Fracturing Fluid (Rheology and Constitutive laws) |
| 12   | Proppant and proppant transport  
Fluid leak-off models, Frac well performance |
| 13   | Fractured well performance  
Treatment and Pressure decline analysis |
| 14   | Hydraulic fracture evaluation – diagnostics issues  
Design issues |
REQUEST FOR ADDITION OF NEW COURSE

Department: ___________________________ Date: 9-24-12

College: Mass Communication

PROPOSED COURSE

Short Title: BUSINESS JOURNALISM

Rubric & No.: MC 3004 Title: Business Journalism

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:

(Indicate rubrics and course numbers)

GRADING

Final Exam: YES X 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)

LEC/REC LEC/SEM 2 LEC LAB LEC/LAB SEM CLIN/PRACT 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)

3004 Business Journalism (3) Prereq: MC 2010. The fundamentals of reporting as it relates to relevant businesses. Students will examine and report on the economy, stock and bond markets, business decisions, the role regulators play, and how all of this affects consumers.

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 __________________ Date: 9-7-2012

College Faculty Approval __________________ Date: 10-2-2012

Department Chair's Signature __________________ (date)

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

College Dean's Signature __________________ (date)

Chair, FS C&C Committee __________________ (date)

College Contact: __________________ (Please print name.)

College Contact E-mail: __________________

Academic Affairs Approval __________________ (date)
Justification for ADDING a new course
MC 3004 Business Journalism

The Manship School had a course on the books called Business Journalism. However, the class was not taught for ten years and recently was dropped from the catalogue. Right after the drop was made, new Manship dean Jerry Ceppos, recognizing the opportunities to report on business in Louisiana, applied for a grant from the Knight Foundation for a visiting business professor. The grant pays for the school to bring in business journalism professional to teach two classes in one visiting semester. The Manship School was awarded this grant and the visiting professor is set to teach in the spring. This course, already approved by the faculty, would be one of the courses the visiting professor would teach.

Since the arrival of our new dean, the Manship School has placed new focus on journalism that can serve Louisiana’s economic communities including the energy and chemical industries. These industries are often difficult to report on because of their specific and complex nature. Therefore, the faculty of the Manship School voted to add Business Journalism again and to commit to adding the class to the regular elective rotation beginning this spring.

Additionally, mass communication students need to take two mass communication electives in order to fulfill their degree requirements. This class will serve as a new elective.

The class, as indicated in the syllabus, will have a long-form journalism project instead of a final allowing the students to apply their class knowledge to a practical project.
MC 3XXX Business Journalism

M-W-F, 1:30 p.m. to 2:20 p.m.
Prof: Noelle Knox
Contact: TBA
Office hours: TBA

**Course Overview:** Welcome to the Business News Desk at LSU, an intensive, hands-on class in the fundamentals of business reporting. The visiting professor leading this class is a veteran business journalist with 20 years of newsroom experience across the United States and Europe for news outlets including the *Associated Press*, *USA Today*, *The New York Times*, *The Detroit News* and *Bloomberg News*. There will also be several guest lectures by senior professionals in business and regulatory fields.

To make this class fun and increase learning retention, students will be assigned beats for the semester and be responsible for staying on top of news in their sectors, paying special attention to Louisiana businesses and the economy. Each class will start with a mock morning news meeting, where the editor (professor) will discuss news events and invite students to pitch story ideas to fill a news website or evening broadcast. The class will discuss potential coverage plans, story formats, sources, photos, graphics and social media. The best of the best ideas during the semester will be pitched to *The Advocate* for publication. Students will be expected to act as professional journalists, especially with regards to attendance/arriving on time, being prepared, meeting deadlines and cell phone/Internet etiquette.

The editor will use current news events and stories to illustrate the lessons in the main textbook, so keeping up with the reading assignments is critical for success in this class. Students will learn what makes the economy tick, how stock and bond markets function, what drives business decisions, the role regulators play, and how all of this affects consumers. A calculator is required to calculate percent changes.

Students also will learn: story structure, good quotes, interview skills, source development, the importance of context and balance, how to dig through public documents, and how to use data effectively.

Because every story has a business angle, this class will benefit journalism students with all areas of interest. This class also will benefit PR students, who will gain a better understanding of how business is covered by the press. And this class will help business/economics majors because of its focus on clear and powerful writing techniques.

**Course Outcomes** Upon completion of this course, students should be able to:

1) Understand and apply fundamental business terminology, theory, and principles including the workings of the economy and stock and bond markets, what drives business decisions, and the roles regulators and policy play.
2) Understand and apply fundamental business terminology, theory, and principles and how all of this affects diverse consumers.
3) Demonstrate ability to adapt journalistic principles from other related courses to cover specialized industries and businesses with the goal of well-researched, well-written, ethical, multi-media stories.

4) Execute public document searches and understand and use data in business storytelling.

Readings:

“Show me the Money: Writing Business and Economic Stories for Mass Communication.”

The Wall Street Journal. Monday through Friday. online or print. Request the student subscription rate.

“The Associated Press Stylebook” 2011, Hard copy, web subscription or iPhone/iPad app.

Students also will be expected to check online news sites for Bloomberg, Reuters and AP to see how their “competitors” are covering their beats.

Recommended secondary readings:

The Financial Times’ Arts & Leisure section on Saturday. A Saturday-only print subscription is available, but an online, full-access, student rate may be cheaper.


Office hours:

The number and depth of topics to be covered will be challenging. Journalists become better journalists by asking questions and demanding things be explained again if they don’t understand. Office hours are designed to answer extra questions and provide coaching. Like many editors, this professor has an open-door policy, so stop in whenever the door is open to ask a question or to discuss journalism in general.

Grading

*The final grade will be based on the following:

In-class Participation: 10%
Homework Story Assignments: 40%
In-class Exercises: 20%
Midterm Exam: 20%
Final Long-Form Journalism Project: 10%

Scale: 90+ = A  80-89.99 = B  70-79.99 = C  65-69.99 = D  below 64.99 = F

*Please note graduate students will be expected to research and write three additional business stories to be included in homework story assignments.
Writing assignments will be marked down for incorrect style, grammar, spelling and punctuation. Students following a "professional" major in the Manship School of Mass Communications are expected to use accepted journalism practices in their writing, including AP style. Non-journalism students should strive to follow AP style. All students should embrace the "omit needless words" philosophy and similar guidance from Strunk & White's "Elements of Style" available online at http://www.bartleby.com/141/.

Work will be marked on a 1-5 scale – with a 5 corresponding to an “A” and a 1 to a “F” – similar to a grade point average. Here are the criteria:

5 - The work is of professional quality (for journalism “professional” track students) or high academic quality (for others). It reflects a depth of research, clarity of writing, and a complete grasp of the main concepts presented in the class.

4 - The work is good but needs editing, has an error, or is flawed in one of the categories mentioned above.

3 - The work is weak, needs major editing or reflects an average understanding of key concepts presented in class.

2 - Work fails to meet requirements and needs a complete rewrite.

1 – Unacceptable

Accuracy: Any story with a factual error, including a wrong number or misspelled name, will be marked down one full grade. This rule is designed to impress upon students that one error in a story makes the reader question the accuracy of the entire article.

Plagiarism: Plagiarism is the unacknowledged use of another person’s work, ideas, or assistance. There are many forms of plagiarism; repeating another person’s sentence as your own, adopting a particularly apt phrase as your own, paraphrasing someone else’s argument as your own, or even presenting someone else’s line of thinking in the development of a thesis as though it were your own. It is perfectly acceptable to use the ideas and words of other people, but we must never submit someone else’s work as if it were our own. The easy way out is to give appropriate credit to the originator. In general, all sources must be identified as clearly, accurately, and thoroughly as possible. When in doubt about whether to identify a source, either cite the source or consult me. Penalties for plagiarism and academic dishonesty as outlined in the LSU code of conduct can range from a failing grade for the assignment, the entire course, to expulsion from the university.

Deadlines: If time runs out, students should file the best they’ve got. Papers submitted late will be marked down one full grade. They will be marked down an additional grade for each day they are late. It costs a lot of money to hold a printing press past deadline.

Midterm: At midterm students must come by during office hours, or make an appointment, for a one-on-one evaluation. For this meeting bring a file of your work in chronological order.
**Final project:** In lieu of a final exam, each student will write a 2,000 to 2,500-word article.

The article must be about a publicly traded company in his/her sector in a way that shows the ability to research, report and write a story that examines some aspect of the company's strategy. The article must discuss the business and economic factors that contributed to the strategy and the impact of the strategy on the company's finances, employees and customers. The article must demonstrate the public records research techniques used in class. It must also contain current context and facts that make it newsworthy. The best of the best will be edited and offered to *The Advocate* for publication.

A list of companies to choose from will be provided at the first lecture and each student must have made his or her selection by Feb. 8. The companies will be based in Louisiana or have large operations in the state. Students are encouraged to visit a local location of the company to familiarize themselves with local management and its offerings to customers.

The topic of the article is to be decided by the student after the company has been chosen. Each student is expected to do some preliminary research to determine some of the major issues surrounding the company. Students are encouraged to discuss potential topics with the professor before beginning work. In addition, each student must submit a one-page outline of their topic and a list of potential interview subjects by March 6.

Students are encouraged to begin work as soon as possible on the final project instead of waiting until the last few weeks of the term.

**Extra Credit**

Compare and contrast "The Big Short" (suggested secondary reading) to the front-page coverage of the financial crisis in *The Wall Street Journal*. Focus on style, sources, use of data, and conclusions. The analysis should be between three and five double-spaced pages and can account for between 1% to 5% of student's grade.

Student articles published in *The Advocate* will be counted for extra credit. The grade will depend on the amount of editing and extra reporting required.

**Tentative Class Schedule**

The schedule will vary depending on breaking news events, availability of guest speakers and class dynamics. Schedule of reading, tests and homework is tentative and may be revised.

**Semester Calendar**


Jan. 18: Homework due. Quiz. Discussion on ethics. (Last day for students to trade beat assignments and pick main companies for coverage.)
Jan. 21: MLK holiday, no class.

Jan 23: (Last day to drop class without receiving a "W" grade; the 24th is the last day to add class for credit.) Discussion on Chapter 3. In-class exercise: Internet tools that help you stay on top of your beat.


Jan. 28: Discussion on Chapter 4. In-class exercise: income statements and balance sheets.

Jan. 30: Unemployment assignment due. In-class exercise: listen to replay of a conference call and compare against the press release. Homework: compare and critique the day’s coverage by the WSJ, Bloomberg and AP, due Feb. 1.

Feb. 1: Quiz. In-class writing exercise: now it’s your turn -- deadline earnings coverage.

Feb. 4: Discussion on Chapter 5. Homework: 8K (will be discussed in class), due Feb. 6.

Feb. 6: Quiz. Homework on 8K due. Discussion and brainstorming story ideas from 8Ks and other SEC documents.

Feb. 8: Target company for final project due. Guest speaker from the SEC enforcement division.

Feb. 11: Mardi Gras, no class.


Feb. 15: Discussion on Chapter 7. In-class discussion on Facebook’s S1 filing and IPO.

Feb. 18: In-class discussion and writing exercise: covering the stock market.

Feb. 20: In-class discussion and writing exercise: covering bonds (corporate and government).

Feb. 22: Guest speaker from a Wall Street investment bank.

Feb. 25: In-class discussion on key elements of beat coverage, interview techniques and good quotes. Homework: interview and brainstorm with at least two potential sources for your final project, type up highlights/best quotes. Due March 4.

Feb. 27: Chapter 8. In-class exercise – proxy statements and calculating executive pay. Homework: Using the AP’s formula, calculate the executive pay (excluding the CEO, if already on the AP list) of the next four highest-paid executives of a company on your beat and compare to the previous year. Write a quick analysis of why pay went up or down and how it compared to the next largest competitor. Due March 1.
March 1: Quiz. Homework on executive pay due. In-class exercise on insider selling/buying. Homework assignment: find active insider buying/selling in one of your companies and compare it to the stock price performance during the same period. Due March 4.

March 4: Insider buying/selling homework due. Source interviews due. Class discussion about source interviews, next steps and new story angles.

March 6: Final project proposals due. Review for midterm exam.

March 8: Midterm exam.

March 11: (All students must set up one-on-one performance reviews with the professor during office hours this week, or by appointment.) Discussion on Chapter 9. In-class exercise: state or regulatory filings of private companies. Homework assignment: write a 500-word summary of the role private and small companies play in your sector and list five places where you might look for public documents. Due March 15th.

March 13: Discussion on Chapter 10. In-class exercise: Form 990s.

March 15: Quiz. Discussion on FOIA requests and appeals. Homework: write a FOIA request. Due March 22nd.


March 20: Discussion of the role of the Federal Reserve in the economy. In-class exercise: covering a real-time Federal Reserve FOMC meeting. Homework: compare and contrast the day’s coverage in 500 words.

March 22: No quiz. Homework on FOIA due. Discuss Chapters 11 and 12. Homework: a trip to a courthouse to find a case involving a company in your sector and write up a short summary of the arguments, current status and potential outcomes. Due March 27.

Mar. 25: Chapter 14 (Note: Chapter 13 will be covered next week.) Discussion of the previous chapters will be led by a guest speaker who will be an investigative journalist.

March 27: Courthouse homework due. Discussion on energy, the economy (local and national) and global politics. (Reading will be assigned in advance.)

March 29: Spring break.

April 1: Spring break

April 3: Spring break

April 5: Spring break

April 8: Guest speaker on energy regulation from the Louisiana Dept. of Natural Resources.
April 10: Chapter 13. Discussion of local real estate trends.

April 12: Quiz. Guest speaker from the County Recorder of Orleans Parish. Homework: a trip to the local county recorder's office to find and explain (in 300 words) one property transaction involving a company on your beat, due April 19.

April 15: Lecture on labor relations, employment laws and the EEOC/NLRB. Homework: write a 500-word summary of labor conditions, pay and any litigation, regulatory enforcement and union activity in your sector. Due April 19.

April 17: Consumer protection: Laws and recourse. Homework: write a 500-word article on consumer protection laws pertaining to your sector, including any milestones in legislation or litigation. Due April 19.

April 19: Quiz. Homework from County Recorder due. Lecture on international trade and foreign exchange, the role of the WTO and government protectionism and subsidies.

April 22: International finance and the euro crisis. The role of the EU, IMF and ECB. Homework: write a 500-word article about how recent trends in a key currency have affected your sector or one of the companies in your sector. Due April 26.

April 24: International finance continued: The role of China.

April 26: Quiz. Discussion on Chapter 15: more web tools for journalists and the risks of being misled by bloggers and social media.

April 29: Review

May 1: Review


May 6: Lecture: job search skills: the art of the cover letter, networking and sucking up to potential employers.

May 8: No class.

May 10: Final project due.
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering

Present Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Circuits I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
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<td>If combination course type, # hrs. of credit for lecture:</td>
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<td>Repeat Credit Max (if repeatable)</td>
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<tr>
<td>Graduate Credit?</td>
<td>Yes: X No:</td>
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<tr>
<td>Credit will not be given for this course and:</td>
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<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
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</tr>
<tr>
<td>LEC 3</td>
<td>LAB</td>
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<td>3</td>
</tr>
<tr>
<td>Grading System: Letter Grade</td>
<td>X Pass/Fail</td>
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</tbody>
</table>

Course Description:

Include course number, title, etc., exactly as it appears in the General Catalog

2120 Circuits I (3) Prereq.: credit or registration in MATH 2090 and PHYS 2102 required or consent of department. Time domain analysis of electrical networks.

Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Circuits I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
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</tr>
<tr>
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<td>lab/sem rec:</td>
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<tr>
<td>Repeat Credit Max (if repeatable)</td>
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<tr>
<td>Graduate Credit?</td>
<td>Yes: X No:</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td></td>
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<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
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<tr>
<td>LEC 3</td>
<td>LAB</td>
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<tr>
<td>Total Weekly Contact Hours:</td>
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</tr>
<tr>
<td>Grading System: Letter Grade</td>
<td>X Pass/Fail</td>
</tr>
</tbody>
</table>

Course Description:

Include course number, title, etc., exactly as it appears in the General Catalog

2120 Circuits I (3) Prereq.: Credit or registration in EE 1810. MATH 2090 and PHYS 2102 or consent of department. Time domain analysis of electrical networks.

These fields are automatically generated based on the text content of the document. The form is filled out with relevant information and signed by various parties, ensuring the requirements for changing an existing course are met.
EE 2120 Justification:

EE 1810 is a new required course in electrical and computer engineering for incoming freshman. The course will provide a foundation for students entering into both curricula. The course should be taken as early in these curricula as possible. Making EE 1810 a co-requisite with EE 2120 will facilitate this.

Prerequisites:

EE 2120 is a prerequisite for the following courses: EE 2130, EE 2230

Curriculum:

Majors:

EE 2120 is a required course in the electrical engineering (EE) and computer engineering curricula.

Minors:

EE 2120 is required in the electrical and computer engineering minor.
Request for CHANGING an Existing Course

### Present Course Description

- **Title:** Digital Logic Laboratory
- **Course Number:** EE 2731
- **Department:** Electrical and Computer Engineering
- **College:** Engineering
- **Date Submitted:** 3/15/12

### Proposed Course Description

- **Title:** Digital Logic Laboratory
- **Course Number:** EE 2740
- **Department:** Electrical and Computer Engineering
- **College:** Engineering

#### Course Description:

**2731 Digital Logic Laboratory (2) Prereq.: EE 2730. 1 hr. lecture; 2 hrs. lab. Familiarization with conventional logic gates and flip-flops; design and testing of various combinational and sequential circuits.**

**2740 Digital Logic Laboratory (2) Prereq.: EE 2740. 1 hr. lecture; 2 hrs. lab. Familiarization with conventional logic gates and flip-flops; design and testing of various combinational and sequential circuits.**

---

**Contact Hours Per Week:** (Indicate hours in appropriate course type.)

<table>
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<tr>
<th>LEC</th>
<th>LAB</th>
<th>SEM</th>
<th>REC</th>
<th>RES</th>
<th>IND</th>
<th>CLIN</th>
<th>PRACT</th>
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</table>

**Total Weekly Contact Hours:** 3

**Grading System:** Letter Grade _x_ Pass/Fail _x_

---

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

**Is this course included in any curricula, concentrations, or minors?** Yes ( ) No ( )

**Is this course a prerequisite or corequisite for other courses?** Yes ( ) No ( )

**Is this course on the General Education list?** Yes ( ) No ( )

**JUSTIFICATION/EXPLANATION:** Use separate sheet.

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

**APPROVALS:**

- **Department Faculty Approval:** T.K., Adams, 3/15/12
- **College Faculty Approval:** M.H., 4/18/12
- **College Dean's Signature:** T. J., 10/2/12
- **Chair, FS C & C Committee:** T. J., 10/2/12

**College Contact:**

- **E-mail:** (Please print name.)

---

**Effective Date:** 25/2014

---
Justification

EE 2730 is being replaced by EE 2740

EE 2731 is required in two curricula:

Electrical Engineering

Computer Engineering
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering

Course: EE 3160

Present Course Description

Title: Introduction to Digital Signal Processing

Semester Hours of Credit: 3

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Graduate Credit? Yes: No: x

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Total Weekly Contact Hours: 3

Grading System: Letter Grade x Pass/Fail

Course Description:

3160 Introduction to Digital Signal Processing (3) Prereq.: EE 3610 or equivalent. Digital processing of continuous-time signals: Discrete-time Fourier transforms; z-transform, signals and systems in the transform domains; Digital filter design techniques; Discrete Fourier transform and FFT algorithm.

Proposed Course Description

Title: Introduction to Digital Signal Processing

Semester Hours of Credit: 3

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Graduate Credit? Yes: No: x

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Total Weekly Contact Hours: 3

Grading System: Letter Grade x Pass/Fail

Course Description:

3160 Introduction to Digital Signal Processing (3) Prereq.: EE 2130 and EE 2810 or equivalent. Digital processing of continuous-time signals: Discrete-time Fourier transforms; z-transform, signals and systems in the transform domains; Digital filter design techniques; Discrete Fourier transform and FFT algorithm.

These questions must be answered completely and accurately or proposal will be returned.

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

Is this course included in any curricula, concentrations, or minors? Yes ( ) No ( x )

If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses? Yes (x) No ( )

If yes, list courses; use separate sheet.

Is this course on the General Education list? Yes ( ) No (x)

JUSTIFICATION/EXPLANATION: Use separate sheet.

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:

Department Faculty Approval Date: 4/3/12

Chair's Signature: P. K. Ahmed (Date)

Graduate Dean's Signature: (Date)

College Contact: (Please print name.)

College Contact E-mail: 

College Faculty Approval Date: 4/18/12

Chair, FS C C & C Committee: (Date)

Academic Affairs Approval: (Date)
EE 3160 prerequisite change Justification:

EE 2810 is added to the curriculum and covers topics in MATLAB needed to implement DSP algorithms and model DSP signals and systems. MATLAB was previously introduced in EE 3610. EE 2130 introduces students to frequency domain signals and systems, transfer functions and transforms.

Further justification for removing EE 3610 as a prerequisite is that digital signal processing (DSP) is now being taught around the country more as a first course in signal processing. Traditionally, DSP has been taught after analog signal processing. Since current technology is now almost exclusively digital, there is a move to separate the analog and digital signals courses.

Considering the importance of DSP, some computer engineering students will also like to take 3160. Having 2810 as pre-requisite will help EEC students to enroll in the course.

Prerequisite:

EE 3160 is a prerequisite for EE 4160 and EE 7150
# Request for CHANGING an Existing Course

**Department**: Electrical and Computer Engineering  
**College**: Engineering  
**Course Rubric and #**: EE 3530  
**Date**: 4/3/12

## Present Course Description

**Title**: Introduction to Control Engineering

- **Semester Hours of Credit**: 3
- **Contact Hours Per Week**: 3 (LEC) 3 (LAB) 0 (SEM) 0 (REC) 0 (IND) 0 (CLIN/PRAC)
- **Total Weekly Contact Hours**: 3
- **Grading System**: Letter Grade _X_ Pass/Fail

**Course Description**: 3530 Introduction to Control Engineering (3) Prereq.: EE 2130. Modeling, simulation, realization, analysis, and feedback control design of dynamic systems.

---

## Proposed Course Description

**Title**: Introduction to Control Engineering

- **Semester Hours of Credit**: 3
- **Contact Hours Per Week**: 3 (LEC) 3 (LAB) 0 (SEM) 0 (REC) 0 (IND) 0 (CLIN/PRAC)
- **Total Weekly Contact Hours**: 3
- **Grading System**: Letter Grade _X_ Pass/Fail

**Course Description**: 3530 Introduction to Control Engineering (3) Prereq.: EE 2130 and EE 2810. Modeling, simulation, realization, analysis, and feedback control design of dynamic systems.

---

**JUSTIFICATION/EXPLANATION**: Use separate sheet.

**Note**: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

## APPROVALS:

- **Department Faculty Approval Date**: 4/3/12  
  **Department Chair's Signature**: P.K. Almeta - 4/11/2012

- **College Faculty Approval Date**: 4/18/12  
  **College Dean's Signature**: [Signature] - 10/2/2012

- **Graduate Dean's Signature**: [Signature] - [Date]
- **College Contact**: [Name] - [E-mail]  
  **College Contact E-mail**: [E-mail]  
  **Academic Affairs Approval**: [Signature] - 10/8/12
Justification:

EE 2810 will provide students with a background using MATLAB. MATLAB is a valuable tool in the simulation and modeling of dynamic control systems.

Prerequisites:

EE 3530 is a prerequisite to the following senior courses in controls: EE 4560, 4580, and 4585.
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering

Course Rubric and #: EE 3610 Date 4/3/12

Present Course Description

Title: Signals and Systems

Semester Hours of Credit: 3

If combination course type, # hrs. of credit for: lab/sem/ rec: 

Repeat Credit Max (if repeatable): 

Graduate Credit?: Yes: X No: 

Credit will not be given for this course and: 

Contact Hours Per Week: (Indicate hours in appropriate course type.)

LEC 3 LAB ___ SEM ___ REC ___ RES/IND ___ CLIN/ PRACT ___

Total Weekly Contact Hours: ___3___

Grading System: Letter Grade _X_ Pass/Fail ___

Course Description:
Include course number, title, etc., exactly as it appears in the General Catalog

3610 Signals and Systems (3) Prereq: EE 2130. Methods of analysis of continuous time signals and systems.

Proposed Course Description

Title: Signals and Systems

Short Title: SIGNALS AND SYSTEMS

Semester Hours of Credit: 3

If combination course type, # hrs. of credit for: lab/sem/ rec: 

Repeat Credit Max (if repeatable): 

Graduate Credit?: Yes: X No: 

Credit will not be given for this course and: 

Contact Hours Per Week: (Indicate hours in appropriate course type.)

LEC 3 LAB ___ SEM ___ REC ___ RES/IND ___ CLIN/ PRACT ___

Total Weekly Contact Hours: ___3___

Grading System: Letter Grade _X_ Pass/Fail ___

Course Description:
Include course number, title, etc., exactly as it will appear in the General Catalog

3610 Signals and Systems (3) Prereq: EE 2130 and 2810. Methods of analysis of continuous time signals and systems.

JUSTIFICATION/EXPLANATION: Use separate sheet

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:

Department Faculty Approval Date 4/3/12 

Department Chair’s Signature 4/11/2012

Graduate Dean’s Signature (Date)

College Contact: (Please print name.)

College Contact E-mail: ________________________________

College Faculty Approval Date 4/18/12

College Dean’s Signature (Date)

Chair, FS C & C Committee (Date)

Academic Affairs Approval (Date)
Justification:

EE 2810 will provide students with a background in MATLAB. MATLAB is a valuable tool for signal processing and linear systems applications. Previously, only a cursory coverage of MATLAB was done in EE 3610 which did not allow Matlab to be fully utilized in this course. Now a more extensive coverage of MATLAB in 2810 will prepare the students from many different courses in ECE including 3610.

Prerequisites:

EE 3610 is a prerequisite for EE 4610 and 4625

Curriculum:

Majors:

EE 3610 is a required course in the electrical engineering (EE) curriculum.

Minors:

EE 3610 is required in the electrical and computer engineering minor.
**Request for CHANGING an Existing Course**

**Department:** Electrical and Computer Engineering  
**Course Rubric and #:** EE 3755  
**Date:**

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<tr>
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<td>COMPUTER ORGANIZATION</td>
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<td><strong>Contact Hours Per Week:</strong> (Indicate hours in appropriate course type.)</td>
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<td><strong>Repeat Credit Max (if repeatable):</strong></td>
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<td><strong>Graduate Credit?</strong></td>
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**Credit will not be given for this course and:**

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<tr>
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<th>LEC 3</th>
<th>LAB</th>
<th>SEM</th>
<th>REC</th>
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<td><strong>Course Description:</strong></td>
<td>3755 Computer Organization (3) Prereq.: EE 2730 or equivalent. Credit will not be given for both this course and CSC 3501. Structure and organization of computer systems; instruction sets; arithmetic; data path and control design.</td>
<td>3755 Computer Organization (3) Prereq.: EE 2740 or equivalent. Credit will not be given for both this course and CSC 3501. Structure and organization of computer systems; instruction sets; arithmetic; data path and control design.</td>
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</table>

**JUSTIFICATION/EXPLANATION:** Use separate sheet.

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.
Justification:
EE 2730 is being replaced by EE 2740

Required:
EE 3755 is required in Computer Engineering

Prerequisite:
EE 3755 is a prerequisite for EE 4720, 4760, 7715, 7760, 7785
### Request for CHANGING an Existing Course

**Department:** Electrical and Computer Engineering  
**College:** Engineering  
**Course Number and #:** EE 4242  
**Date:** 3/15/12

#### Present Course Description

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<thead>
<tr>
<th>Title</th>
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<td>Graduate Credit?</td>
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**Credit will not be given for this course and:**

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<th>Contact Hours Per Week: (Indicate hours in appropriate course type.)</th>
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<tr>
<td>LEC</td>
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<td>LAB</td>
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<td>SEM</td>
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<tr>
<td>RES/IND</td>
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<td>CLIN/PRACT</td>
</tr>
</tbody>
</table>

**Total Weekly Contact Hours:** 4

**Grading System:** Letter Grade _X_ Pass/Fail

**Course Description:**

4242 VLSI Design (3) Prereq.: EE 2730, 3220 2 hrs. lecture; 2 hrs. lab. ABET category: 2 hrs. design; 1 hr. engineering science. Design and implementation of logic gates for application-specific integrated circuits; system design methodology using CMOS technology.

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### Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>VLSI Design</th>
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</thead>
<tbody>
<tr>
<td><strong>Semester Hours of Credit</strong></td>
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<tr>
<td>If combination course type, # hrs. of credit for lecture</td>
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<td>Graduate Credit?</td>
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**Credit will not be given for this course and:**

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<td>CLIN/PRACT</td>
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</table>

**Total Weekly Contact Hours:** 4

**Grading System:** Letter Grade _X_ Pass/Fail

**Course Description:**

4242 VLSI Design (3) Prereq.: EE 2740, 3220 2 hrs. lecture; 2 hrs. lab. Design and implementation of logic gates for application-specific integrated circuits; system design methodology using CMOS technology.

---

**TO BE ANSWERED COMPLETELY AND ACCURATELY OR PROPOSAL WILL BE RETURNED.

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (x)  
Is this course included in any curricula, concentrations, or minors? Yes ( ) No (x) If yes, please list on a separate sheet.  
Is this course a prerequisite or corequisite for other courses? Yes (x) No ( ) If yes, list courses; use separate sheet.  
Is this course on the General Education list? Yes ( ) No (x)  

**JUSTIFICATION/EXPLANATION:** Use separate sheet.

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

**APPROVALS:**

- **Department Faculty Approval Date:** 3/15/12  
  - Department Chair's Signature: 4/2/2012  
  - Graduate Dean's Signature: 10-2-12

- **College Faculty Approval Date:** 4/18/12  
  - College Dean's Signature: (Date)

- **Academic Affairs Approval:** (Date)
Justification for changes to EE 4242:

EE 2730 is being replaced by EE 2740. The material needed for EE 4242 will be contained in EE 2740.

Prerequisites:

EE 4242 is a prerequisite to EE 7246 and EE 7248. These courses will not be affected as the content of EE 4242 is not changed.
# Request for CHANGING an Existing Course

**Department**: Division of Electrical and Computer Engineering  
**Course Title**: Analog Communication

**Proposed Course Description**

<table>
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**Semester Hours of Credit**: 3

If combination course type, # hrs. of credit for:

- **Lecture**: 3
- **Lab/sem**: 
- **Rec**: 

Repeat Credit Max (if repeatable): 

Graduate Credit? Yes: X No: 

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)

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</table>

Total Weekly Contact Hours: 3

Grading System: Letter Grade X Pass/Fail

Course Description:

4610 Analog Communication (3) Prereq.: EE 3610 and 3140. Amplitude, frequency, phase and pulse modulation, noise in analog modulation, applications.

---

**4610 Analog Communication (3) Prereq.: EE 3610 and 3150 or equivalent. Amplitude, frequency, phase and pulse modulation, noise in analog modulation, applications.**

---

**APPROVALS:**

- **Department Faculty Approval Date**: 8/21/12  
- **Department Chair's Signature**: 8/21/2012  
- **Graduate Dean's Signature**: 10-2-12  
- **College Contact**: [Please print name.]

**College Contact E-mail:**

**College Faculty Approval Date**: 9/17/12  
**College Dean's Signature**: [Signature]

**Chair, FS C & C Committee**: [Signature]

**Academic Affairs Approval**: [Signature]
EE 3140 was dropped, and replaced with EE 3150 in the catalog.
Request for CHANGING an Existing Course

Department: Division of Electrical and Computer Engineering
Course: EE 4625

Present Course Description
Title: Digital Communication and Networking

Semester Hours of Credit: 3

If combination course type, # hrs. of credit for: _____

Repeat Credit Max (if repeatable): ______

Graduate Credit? Yes: ___ No: ___

Credit will not be given for this course and: __________

Contact Hours Per Week: (Indicate hours in appropriate course type.)
LECT ___ LAB ___ SEM ___ REC ___ TOTAL ___

Total Weekly Contact Hours: 3

Grading System: Letter Grade: __ Pass/Fail: __

Course Description:
Include course number, title, etc., exactly as it appears in the General Catalog:
4625 Digital Communication and Networking (3) Prereq.: EE 3610 and 3140 or equivalent. Digital coding of analog information, baseband transmission, decision theory, modulation, design considerations, applications.

Is this course included in any curricula, concentrations, or minors? Yes (__) No (x) If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses? Yes (__) No (x) If yes, list courses; use separate sheet.

Is this course on the General Education list? Yes (__) No (x)

JUSTIFICATION/EXPLANATION: Use separate sheet.

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:
Department Faculty Approval Date: 8/21/12
Department Chair's Signature: ___ (Date)

Graduate Dean's Signature: ___ (Date)

College Contact:
(Please print name.)

College Contact E-mail: ___

College Faculty Approval Date: 9/17/12
College Dean's Signature: ___ (Date)

Chair, FSC & C Committee: ___ (Date)

Academic Affairs Approval: ___ (Date)
Justification

EE 3140 was dropped, and replaced with EE 3150 in the catalog.
Request for CHANGING an Existing Course

Present Course Description

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Proposed Course Description

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<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
</tbody>
</table>

SHOW YOUR WORK HERE

% T. K. Johnson, 4/12/2012

Department Chairs Signature (Date)

College Dean's Signature (Date)

College Contact E-mail: _______________________________________

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:

Rev. 3/2012

Department Faculty Approval Date 3/15/12

College Faculty Approval Date 4/18/12

College Dean's Approval Date 4/20/12

Chair, FS C & C Committee (Date)

Academic Affairs Approval (Date)
Justification for changes to EE 4720:

EE 3750 is being replaced by EE 3752. Content required for EE 4720 will be contained in the new course EE 3752.

Required:

EE 4720 is required in Computer Engineering

Prerequisites:

EE 4720 is a prerequisite to EE 7720, EE 7725, EE 7728 and EE 7765. These courses will not be affected since the content of EE 4720 has not changed.
**Request for CHANGING an Existing Course**

**Department:** Division of Electrical and Computer Engineering  
**College:** Engineering  
**Course:** EE 4660  
**Date:** 8/21/12

### Present Course Description

**Title:** Random Processes I

**Semester Hours of Credit:** 3

- **Credit hours for lecture:** 
- **Lab/sem credit:** 
- **Repeat Credit Max:** Yes (x) No: 
- **Graduate Credit:** Yes: (x) No:

**Course Description:**
Probability space; random variables and processes; second order processes; spectral analysis; filtering.

### Proposed Course Description

**Title:** Random Processes I

**Semester Hours of Credit:** 3

- **Credit hours for lecture:** 
- **Lab/sem credit:** 
- **Repeat Credit Max:** Yes: (x) No:
- **Graduate Credit:** Yes: (x) No:

**Course Description:**
Probability space; random variables and processes; second order processes; spectral analysis; filtering.

---

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

**APPROVALS:**

- **Department Faculty Approval Date:** 8/21/12  
- **Department Chair's Signature:** 8/23/2012  
- **Graduate Dean's Signature:** 10-2-12

- **College Faculty Approval Date:** 9/1/12  
- **College Dean's Signature:** 9/10/12  
- **Chair, FSC & C Committee:** 9/1/2012

**College Contact:**
(please print name)

**College Contact E-mail:**

---

**College Contact:**
(please print name)

**Academic Affairs Approval:** (Date)
Justification

EE 3140 was dropped, and replaced with EE 3150 in the catalog.

EE 4660 Prerequisites:

EE 4660 is a prerequisite for the following courses:

EE 7530
EE 7540
EE 7610
EE 7615
EE 7630
EE 7640
EE 7660
**Request for CHANGING an Existing Course**

Department: Electrical and Computer Engineering  
College: Engineering  
Course Rubric and #: EE 4740  
Date: 3/15/12

### Present Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Discrete Structures for Computer Engineering</th>
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</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
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</tr>
<tr>
<td>If combination course type, # hrs. of credit for lecture:</td>
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<tr>
<td>Repeat Credit Max (if repeatable)</td>
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<tr>
<td>Graduate Credit?</td>
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<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
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<tr>
<td>Grading System: Letter Grade</td>
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</table>

**Course Description:**

7440 Discrete Structures for Computer Engineering (3) Prereq.: EE 2740 or equivalent. Mathematical logic and proof methods; graph theory; complexity of algorithms; algebraic structures; applications in computer engineering.

---

### Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Discrete Structures for Computer Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
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<td>Total Weekly Contact Hours:</td>
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<td>Grading System: Letter Grade</td>
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</table>

**Course Description:**

7440 Discrete Structures for Computer Engineering (3) Prereq.: EE 2740 or equivalent. Mathematical logic and proof methods; graph theory; complexity of algorithms; algebraic structures; applications in computer engineering.

---

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

**APPROVALS:**

Department Faculty Approval Date: 3/15/12  
Department Chair's Signature: [Signature]  
Date: [Date]

Graduate Dean's Signature: [Signature]  
Date: 10-2-12

College Contact: ____________________________  
(Please print name.)

College Contact E-mail: ____________________________

College Faculty Approval Date: 4/18/12  
College Dean's Signature: [Signature]  
Date: 4/18/12

Chair, FS C & C Committee: [Signature]  
Date: 10/8/12

Academic Affairs Approval: [Signature]  
Date: [Date]
Justification:

EE 2730 is being replaced by EE 2740. Content required for EE 4740 will be contained in the new course EE 2740.

Required:

EE 4740 is required in Computer Engineering
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering  
College: Engineering

Course Rubric and #: EE 4745  
Date: 3/15/12

Present Course Description

Title: Neural Computing

Semester Hours of Credit: 3

If combination course type, # hrs. of credit for lecture: lab/sem
Repeat Credit Max (if repeatable): __
Graduate Credit? Yes: ___ No: ___

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Total Weekly Contact Hours: ___

Grading System: Letter Grade: ___ Pass/Fail: ___

Course Description:

4745 Neural Computing (3) Prereq.: EE 3750 and MATH 2090. ABET Category: 2 hrs. design; 1 hr. engineering science. Neural networks and automata; network architecture; learning models; applications to signal processing, vision, speech, and robotics; VLSI implementations.

Proposed Course Description

Title: Neural Computing

Short Title: NEURAL COMPUTING

Semester Hours of Credit: 3

If combination course type, # hrs. of credit for lecture: lab/sem
Repeat Credit Max (if repeatable): __
Graduate Credit? Yes: ___ No: ___

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)

Total Weekly Contact Hours: ___

Grading System: Letter Grade: ___ Pass/Fail: ___

Course Description:

4745 Neural Computing (3) Prereq.: EE 2810. Neural networks and automata; network architecture; learning models; applications to signal processing, vision, speech, and robotics; VLSI implementations.

Justification/Explanation:

These questions must be answered completely and accurately or proposal will be returned.

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (x)
Is this course included in any curricula, concentrations, or minors? Yes ( ) No (x) If yes, please list on a separate sheet.
Is this course a prerequisite or corequisite for other courses? Yes (x) No ( ) If yes, list courses; use separate sheet.
Is this course on the General Education list? Yes ( ) No (x)

Note: If course is or will be cross-listed, separate forms must be submitted by each department.

Approvals:

Department Faculty Approval Date: 3/15/12
Department Chair's Signature: 9/12/2012
Graduate Dean's Signature: 10/2/12

College Faculty Approval Date: 4/18/12
College Dean's Signature: 10/2/12

Chair, FS C & C Committee: 10/2/12

Academic Affairs Approval: 10/8/12
Justification for changes to EE 4745:

Prerequisite content required for EE 4745 will be contained in the new course EE 2810. EE 2810 will provide students with a background using MATLAB required to implement signal processing and neural networks.

Prerequisites:

EE 4745 is a prerequisite to EE 7745. EE 7745 is not affected because EE 4745 has not changed.
From: Charles Delzell <delzell@math.lsu.edu>
Sent: Wednesday, September 26, 2012 10:41 PM
To: John D Scalzo
Cc: perlis@math.lsu.edu
Subject: Dear John: Math OK re EE 4745 & 2740.--Sincerely, Chip Delzell, Math Assoc. Chair

Importance: High

Subj: HC and EE proposals URGENT
From: "John D Scalzo" <scalzo@lsu.edu>
Date: Wed, September 26, 2012 4:20 pm
To: "delzell@math.lsu.edu" <delzell@math.lsu.edu>

Chip,

Here are a few simple items the University C&C has requested for the submission of our curriculum. For these, I only need an email from you that Math supports these changes:

> 1. EE 4745 - We will need an email from the MATH department that lets them know that you have dropped MATH 2090 from the prerequisite.

Rationale: EE 2810 is now the prerequisite for EE 4745.
EE 2810 requires credit or registration in EE 2130, and EE 2130 already has MATH 2090 as a prerequisite.

2. EE 2740 - need a letter of support from MATH to add MATH 1550 as a prerequisite.

Rationale: EE 2740 replaces EE 2720 in the curriculum.
EE 2720 used to have Math 1550 as a prerequisite, so EE 2740 will have it also.

John Scalzo
Louisiana State University
Instructor, Undergraduate Advisor
Division of Electrical and Computer Engineering School of Electrical Engineering and Computer Science
3172 Patrick F. Taylor Hall
http://www.ece.lsu.edu/~scalzo/index.html
scalzo@lsu.edu
225-578-5478
[Description: footer_signature]
# Request for CHANGING an Existing Course

## Department and College
- **Department:** Electrical and Computer Engineering
- **College:** Engineering

## Course Details
- **Course Rubric and #:** EE 4750
- **Date:** 3/15/12

### Present Course Description
- **Title:** Microprocessor Interfacing Techniques
- **Semester Hours of Credit:** 4
  - If lecture/lab, # hrs. of credit for lecture: 2
  - # hrs. of credit for lab: 2
- **Repeat Credit Max (if repeatable):**
- **Graduate Credit?** Yes: __________ No: __________
- **Credit will not be given for this course and:**

### Proposed Course Description
- **Title:** Microprocessor Interfacing Techniques
- **Semester Hours of Credit:** 3
  - If lecture/lab, # hrs. of credit for lecture: 2
  - # hrs. of credit for lab: 1
- **Repeat Credit Max (if repeatable):**
- **Graduate Credit?** Yes: __________ No: __________
- **Credit will not be given for this course and:**

### Contact Hours Per Week (from ACM):
- **LEC 2**
- **LAB 6**
- **SEM RES/IND CLIN/PRACT**
- **Total Weekly Contact Hours:** 8

### Grading System:
- **Letter Grade:** X
- **Pass/Fail:**

### Course Description:
- Include course number, title, etc., exactly as it appears in the General Catalog.

**4750 Microprocessor Interfacing Techniques (4) Prereq.:**
3751. 2 hrs. lecture; 6 hrs. lab. ABET category: 2 hrs.
 Theory and design techniques of microprocessor interfaces to memory and output devices.

### Notes:
- These questions must be answered completely and accurately or proposal will be returned.
- Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (x)
- Is this course included in any curricula, concentrations, or minors? Yes ( ) No (x) If yes, please list on a separate sheet.
- Is this course a prerequisite or corequisite for other courses? Yes ( ) No (x) If yes, list courses; use separate sheet.
- Is this course on the General Education list? Yes ( ) No (x)

### JUSTIFICATION/EXPLANATION:
Use separate sheet.

### Note:
IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

### APPROVALS:
- **Department Faculty Approval Date:** 3/15/12
- **Department Chair's Signature:**
- **Graduate Dean's Signature:**
  - Date: 10/2/12
- **College Faculty Approval Date:** 4/18/12
- **College Dean's Signature:**
  - Date: 10/2/12
- **Chair, FS C & C Committee:**
  - Date: 10/2/12
- **Academic Affairs Approval:**
  - Date: 4/18/12
Course Modification Justification

EE 4750 — “Microprocessor Interface Techniques”

The reduction of the number of credit hours for the laboratory part of this course is justified due to newer and easier interface techniques used to implement the hardware and the use of new protocols for serial communication, such as I²C, which facilitates the design and reduces the amount of coding required for such interfaces. Also, circuit boards and parts are made available to the students and part of the work which used to be done in the lab is now done outside of the lab. Furthermore, in past years, a substantial design project in EE 4750 served a role in the computer engineering curriculum that is now better met by the senior design courses EE 4810 and 4820, so the number of lab hours in EE 4750 can be reduced.

Prepared by: Gabriel A. de Souza
February 27, 2012
Prerequisite Change:

EE 3751 is being dropped and replaced with EE 3752.
EE 4750 – Microprocessor Interfacing Techniques

Catalog Data: 4750 Microprocessor Interfacing Techniques (3) Prereq.: EE 3752. 2 hrs. lecture; 2 hrs. lab. Theory and design techniques of microprocessor interfaces to memory and input/output devices.

Prerequisites by Topic:
1. Basic knowledge of a microprocessor
2. Assembly language skill
3. Sequential Circuits

Textbook: None. Manuals and class reference material constitute the reference material.

Goals/Instructional Objectives:
This course is intended to familiarize the student with the basic design principles for different types of interfaces between the microprocessor, microcontrollers and other system components. The student is expected to conduct four design experiments lasting one to three weeks each depending on the experiment, in which a small subsystem is designed and tested. The subject of the experiments is synchronized to the material taught in class. Parallel with these experiments a term long and significant design project is required from each student.

Course Learning Outcomes:
At the end of the course, the student should be able to:
• Understand the reasons for different architectural choices in a modern microprocessor-based system including the busing structure and the role of a chip set.
• Understand the functionality of the different system components.
• Design interfaces between the processor and different memory types including SRAM, DRAM and FLASH memories and their synchronous versions.
• Design interfaces between the processor and different I/O devices, such as disk drives serial interfaces and USB peripherals.
• Design a simple system to carry out a set of objectives and to meet a set of criteria.

Expected Performance Criteria:
1. Homework, quizzes and classroom assignments: 10%
2. Midterm Exam: 15%
3. Lab Experiments: 25%*
4. Individual Semester-Long Project (student selected): 25%
5. Final Exam: 25%

*Grading for the lab experiments will consist of written lab reports and submission of programming code.

Grading Scale:
• A ≥ 90
• B ≥ 80
• C ≥ 70
• D ≥ 60
• F < 60
Topics:
1. Introduction to Interfacing Techniques (1 class).
2. Bus Functions: Bus types, signal classification, bus timing, arbitration schemes, examples of existing buses: PCI, PCI-Express, USB3, etc. (6 classes).
3. Memory Interfacing: Basic timing requirements, memory types (SRAM, DRAM, SSRAM, DDR SDRAM, FLASH, etc.) SRAM interfacing, DRAM interfacing, FLASH interfacing, DMA controllers (6 classes).
7. Tests (2 classes).

Schedule: 2 lectures/week of 50 minutes each; 1 lab sessions/week of 2 hours each

Contribution of the Course to Satisfying the ABET Curriculum Criterion:
Engineering Science: 1 credit or 33%
Engineering Design: 2 credits or 67%

Prepared by: Gabriel A De Souza and Lu Peng
Date: February 15, 2012
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering

Present Course Description

<table>
<thead>
<tr>
<th>Title: Real Time Computing Systems</th>
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<td>If combination course type, # hrs. of credit for lecture: lab/sem rec:</td>
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<td>Repeat Credit Max (if repeatable):</td>
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<td>Graduate Credit? Yes: No:</td>
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<td>Credit will not be given for this course:</td>
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<tr>
<td>Contact Hours Per Week:</td>
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<tr>
<td>Total Weekly Contact Hours:</td>
</tr>
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<td>Grading System: Letter Grade: Pass/Fail</td>
</tr>
<tr>
<td>Course Description:</td>
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</table>

Proposed Course Description

<table>
<thead>
<tr>
<th>Title: Real Time Computing Systems</th>
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<tbody>
<tr>
<td>Semester Hours of Credit: 3</td>
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<td>Total Weekly Contact Hours:</td>
</tr>
<tr>
<td>Grading System: Letter Grade: Pass/Fail</td>
</tr>
<tr>
<td>Course Description:</td>
</tr>
</tbody>
</table>


4770 Real Time Computing Systems (3) Prereq: EE 3752 or equivalent. Real-time computing systems; systems components, architectures, I/O structure, interrupts, interfacing, A/D converters, and multitasking.

JUSTIFICATION/EXPLANATION: Use separate sheet.

APPROVALS:

Department Faculty Approval Date: 3/15/12

College Faculty Approval Date: 4/18/12

Department Chair's Signature: 

College Dean's Signature: 

Graduate Dean's Signature: 10-2-12

Chair, FS C & C Committee: 10-2-12

Academic Affairs Approval: 4/6/12

(Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.)
Justification:

EE 3750 is being replaced by EE 3752. Content required for EE 4770 will be contained in the new course EE 3752.
**Request for CHANGING an Existing Course**

**Department**: Electrical and Computer Engineering  
**College**: Engineering  
**Course**: EE 4780  
**Date**: 3/15/12

### Present Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Introduction to Computer Vision</th>
</tr>
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<tbody>
<tr>
<td>Semester Hours of Credit</td>
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| Contact Hours Per Week (Indicate hours in appropriate course type) | LEC 3  
LAB 0  
SEM 0  
REC 0  
RES/IND 0  
CLIN/ PRACT 0 |
| Total Weekly Contact Hours | 3 |
| Grading System | Letter Grade X  
Pass/Fail |

**Course Description**:  
4780 Introduction to Computer Vision (3)  
Prereq.: EE 3750 or equivalent.  
ABET category: 2 hrs. design; 1 hr. engineering science.  
Computer processing of images including image acquisition systems and computer systems for processing images; preprocessing techniques; image segmentation; emphasis on design of image processing software.

### Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Introduction to Computer Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
</tbody>
</table>
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LAB 0  
SEM 0  
REC 0  
RES/IND 0  
CLIN/ PRACT 0 |
| Total Weekly Contact Hours | 3 |
| Grading System | Letter Grade X  
Pass/Fail |

**Course Description**:  
4780 Introduction to Computer Vision (3)  
Prereq.: EE 2810.  
Computer processing of images including image acquisition systems and computer systems for processing images; preprocessing techniques; image segmentation; emphasis on design of image processing software.

**JUSTIFICATION/EXPLANATION**: Use separate sheet.

**Note**: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

**APPROVALS**:  
**Department Faculty Approval Date**: 3/15/12  
**Department Chair's Signature**: 3/30/2012  
**Graduate Dean's Signature**: 10-2-12  
**College Contact E-mail**:  
**College Contact**: (Please print name.)

**College Faculty Approval Date**: 4/18/12  
**College Dean's Signature**:  
**Chair, FS C & C Committee**: 10/2/2012  
**Academic Affairs Approval**: (Date)
Justification:

The best prerequisite for EE 4780 will be now be EE 2810. EE 2810 will provide students with a background using MATLAB. This software is a tool used to implement the signal processing of Images.
Request for CHANGING an Existing Course

Department: Electrical and Computer Engineering  
College: Engineering

Date: 3/15/12

Present Course Description

<table>
<thead>
<tr>
<th>Title</th>
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<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
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<td>LEC ___  LAB ___  SEM ___  REC ___  CLIN/IND ___  PRACT ___</td>
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<td>Total Weekly Contact Hours:</td>
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<td>Grading System: Letter Grade</td>
<td>X Pass/Fail</td>
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</table>

Course Description: 4810 Senior Design I (3) Prereq.: EE 3220, EE 3751, senior standing in the College of Engineering, and one of EE 3410, 3530, 3610, or 3755. 2 hrs. lecture, 2 hrs. lab. Senior design projects.

Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Senior Design I</th>
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<td>Title Description</td>
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<tr>
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<tr>
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<td>Graduate Credit?</td>
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<td>Grading System: Letter Grade</td>
<td>X Pass/Fail</td>
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</table>

Course Description: 4810 Senior Design I (3) Prereq.: EE 3610 or 3752, senior standing in the College of Engineering, and one of EE 3160, 3220, 3410, 3530, or 3755. 2 hrs. lecture, 2 hrs. lab. Senior design projects.

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (X)
Is this course included in any curricula, concentrations, or minors? Yes ( ) No ( ) If yes, please list on a separate sheet.
Is this course a prerequisite or corequisite for other courses? Yes (X) No ( ) If yes, list courses; use separate sheet.
Is this course on the General Education list? Yes ( ) No (X)

JUSTIFICATION/EXPLANATION: Use separate sheet.

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:

Department Faculty Approval Date: 3/15/12  
Department Chair's Signature: 3/30/2012  
Graduate Dean's Signature: 10-2-12  
College Contact: (Please print name.)

College Faculty Approval Date: 4/18/12  
College Dean's Signature: 4/20/12  
Chair, FS C & C Committee: 10/2/2012  
Academic Affairs Approval: 10/8/12
Justification:

EE 3750 is being replaced by EE 3752. EE 3610 is required for all EE students and will provide the first requirement for electrical engineering students to enter the capstone design project. EE 3752 will do the same for computer engineering students. The second list of courses will ensure students entering senior design will have some knowledge of more advanced concepts in electrical or computer engineering.

Prerequisite:

EE 4810 is a prerequisite for EE 4820, the continuation of the senior project in the second semester.
Request for CHANGING an Existing Course

Present Course Description

Title: Internetworking Principles
Semester Hours of Credit: 3
Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC 3, LAB, REC, CLIN/PRACT
Total Weekly Contact Hours: 3
Grading System: Letter Grade X Pass/Fail
Course Description:
Include course number, title, etc., exactly as it appears in the General Catalog.

7770 Internetworking Principles (3) Prereq.: EE 4710 or equivalent. Internet concepts, networks, and transport layers, IP switching, routing techniques, internet security, firewalls.

Proposed Course Description

Title: Internetworking Principles
Short Title: INTNTRWKRNG PRINCIP
Semester Hours of Credit: 3
Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC 3, LAB, REC, CLIN/PRACT
Total Weekly Contact Hours: 3
Grading System: Letter Grade X Pass/Fail
Course Description:
Include course number, title, etc., exactly as it will appear in the General Catalog.

7770 Internetworking Principles (3) Prereq.: EE 3710 or equivalent. Internet concepts, networks, and transport layers, IP switching, routing techniques, internet security, firewalls.

These questions must be answered completely and accurately or proposal will be returned.

Has this change been discussed with and approved by all departments/colleges affected? Yes ( ) No ( ) N/A (X)
Is this course included in any curricula, concentrations, or minors? Yes ( ) No (X) If yes, please list on a separate sheet.
Is this course a prerequisite or corequisite for other courses? Yes ( ) No (X) If yes, list courses; use separate sheet.
Is this course on the General Education list? Yes ( ) No (X)

Justification/Explanation: Use separate sheet.

Note: If course is or will be cross-listed, separate forms must be submitted by each department.

Approvals:

Department Faculty Approval Date: 4/3/12

[Signature] 4/3/2012

Department Chair's Signature: (Date)

[Signature] 10-2-12

Graduate Dean's Signature: (Date)

College Contact: ____________________________

(Please print name.)

College Contact E-mail: ____________________________

College Faculty Approval Date: 4/18/10

[Signature] 4/20/12

College Dean's Signature: (Date)

[Signature] 10-2-12

Chair, FS C & C Committee: (Date)

[Signature] 10/8/12

Academic Affairs Approval: (Date)
EE 7770 Prerequisite Change Justification:

EE 4710 has been deleted and replaced by EE 3710.
Request for CHANGING an Existing Course

Present Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Advanced Heat Transfer I</th>
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</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
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</tr>
</tbody>
</table>

If combination course type, # hrs. of credit for:
- Lecture: 3 lab/sem
- Repeat Credit Max (if repeatable): X
- Graduate Credit?: Yes: No: _

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)
- LEC: 3
- Total Weekly Contact Hours: 3
- Grading System: Letter Grade _ X _ Pass/Fail

Course Description:
- Include course number, title, etc., exactly as it appears in the General Catalog
- 7433 Advanced Heat Transfer I Prereq.: MATH 4039 or equivalent. Steady and transient heat conduction.

Proposed Course Description

<table>
<thead>
<tr>
<th>Title</th>
<th>Advanced Heat Transfer I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
</tbody>
</table>

If combination course type, # hrs. of credit for:
- Lecture: lab/sem
- Repeat Credit Max (if repeatable): X
- Graduate Credit?: Yes: No: _

Credit will not be given for this course and:

Contact Hours Per Week: (Indicate hours in appropriate course type.)
- LEC: 3
- Total Weekly Contact Hours: 3
- Grading System: Letter Grade _ X _ Pass/Fail

Course Description:
- Include course number, title, etc., exactly as it appears in the General Catalog
- 7433 Advanced Heat Transfer I (3) Steady and transient heat conduction; fundamentals of radiation heat transfer.

THESE QUESTIONS MUST BE ANSWERED COMPLETELY AND ACCURATELY OR PROPOSAL WILL BE RETURNED.

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

Is this course included in any curricula, concentrations, or minors? Yes (x) No ( ) If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses? Yes ( ) No (x) If yes, list courses; use separate sheet.

Is this course on the General Education list? Yes ( ) No ( )

JUSTIFICATION/EXPLANATION: Use separate sheet.

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:

Department Faculty Approval Date: 8/13/12
Department Chair's Signature: 9/25/12
Graduate Dean's Signature: 10-2-12
College Contact: ________________
College Contact E-mail: ____________________

College Faculty Approval Date: 9/17/12
College Dean's Signature: 9/25/12
Chair, FS C & C Committee: 10/12/12
Academic Affairs Approval: 10/18/12
JUSTIFICATION:

Fundamentals of radiation heat transfer will be included as an added topic. Together with ME 7443 this class will form the core course sequence in heat transfer and will provide graduate students in thermal science with an advanced fundamental background in a broad range of heat-transfer phenomena.

This course is usually taken in the first semester by graduate students. Hence, they will have no time to take MATH 4038 and this requirement is logistically impossible.

ME 7433 is a core course for graduate students studying thermal science.
GENERAL INFORMATION

Instructor: Dr. Harris Wong, 2513C CEBA, 578-5893, hwong@lsu.edu
Office Hours: W 2 - 5
Class hours: TTh: 10:40 - 12:00
Location: 201 Tureaud
Textbooks:
Prerequisite: Graduate standing

COURSE DESCRIPTION

This is the first comprehensive course in heat transfer at the graduate level. In this course, we study conduction and radiation heat transfer with a reasonable degree of mathematical rigor. We will spend about 2/3 of the semester on conduction and the rest on radiation. After finishing this course, the students should be able to understand and appreciate the current literature in heat transfer.

Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mass, momentum, and energy conservation equations.</td>
</tr>
<tr>
<td>2</td>
<td>Scaling analysis</td>
</tr>
<tr>
<td>3</td>
<td>One dimensional steady heat condition</td>
</tr>
<tr>
<td>4</td>
<td>Two dimensional steady heat condition in Cartesian coordinates</td>
</tr>
<tr>
<td>5</td>
<td>Two dimensional steady heat condition in Cartesian coordinates</td>
</tr>
<tr>
<td>6</td>
<td>Two dimensional steady heat condition in cylindrical coordinates</td>
</tr>
<tr>
<td>7</td>
<td>Two dimensional steady heat condition in cylindrical coordinates</td>
</tr>
<tr>
<td>8</td>
<td>Two dimensional transient heat condition in Cartesian coordinates</td>
</tr>
<tr>
<td>9</td>
<td>Two dimensional transient heat condition in Cartesian coordinates</td>
</tr>
<tr>
<td>10</td>
<td>Two dimensional transient heat condition in cylindrical coordinates</td>
</tr>
<tr>
<td>11</td>
<td>Two dimensional transient heat condition in cylindrical coordinates</td>
</tr>
<tr>
<td>12</td>
<td>Radiation heat transfer</td>
</tr>
<tr>
<td>13</td>
<td>Radiation heat transfer</td>
</tr>
<tr>
<td>14</td>
<td>Radiation heat transfer</td>
</tr>
</tbody>
</table>

GRADING

Your final grade will be determined by the following scheme:

- Class participation and attendance = 10%
- Homework = 20%
- Two progress reports (10% each) = 20%
Midterm exam = 20%
Final exam = 30%

100%

A (90-100%), B (80-89%), C (70-79%), D (60-69%) & F (59% and below).
Homework. Homework assignments will be handed out every class and will be due the next class. Homework solutions will be posted on PAWS. Final grades will be withheld until all assigned homework problems have been turned in. Homework submitted late will be corrected but not graded (no excuse and no exception).

To stimulate good problem solving skills, homework must be in the following format:

Model: Draw sketch of problem, carefully define system
Assumptions: List all assumptions used in solving the problem
Solution: Give a step-by-step solution of the problem, including explanatory sentences where necessary. Also, be careful to keep track of units.

Examinations. There is a midterm examination on Oct. 16 and a comprehensive final examination on the date listed in the final examination schedule. The examinations are open books and notes. Make-up exams will not be allowed unless there is a medical or other emergency reason and permission of the instructor is given prior to the exam.

Progress Reports. A progress report is due at the beginning of each examination. The purpose is to give you an opportunity to review the course materials and see the course from a wider perspective. Use your own words in writing the reports. Do not hand in your lecture notes. The progress reports (preferably typed, although not required) should show your own understanding and organization of the lectures. Reports submitted late will be corrected but not graded (no excuse and no exception).

Extra Help: Beside the three office hours, the instructor can answer questions after class. He is also available any time his door is open. In addition, appointments can be made by phone or email.
Request for CHANGING an Existing Course

Department: Computer Science & Eng.  
College: Engineering  
Course Rubric and #: CSC 3102  
Date: 9/19/2012

Present Course Description

Title: Advanced Data Structures and Algorithm Analysis

Semester Hours of Credit: 3

If lecture/lab, # hrs. of credit for lecture: __  
lab: __

Repeat Credit Max (if repeatable): __  
X

Graduate Credit? Yes: ___  
No: ___

Credit will not be given for this course and: ______

Contact Hours Per Week (from ACM):
LEC 3  
LAB __  
SEM __  
RES/IND __  
CLIN/PRACT __

Total Weekly Contact Hours: ___3___

Grading System: Letter Grade ___X___  
Pass/Fail ___

Course Description:
Include course number, title, etc. exactly as it will appear in the General Catalog.

3102 Advanced Data Structures and Algorithm Analysis
(3) Prereq.: CSC 1254 or 1351 and credit or concurrent enrollment in CSC 2259 or EE 2740. Description and utilization of formal ADT representations, especially those on lists, sets, and graphs; time and space analysis of recursive and nonrecursive algorithms, including graph and sorting algorithms; algorithm design techniques.

Proposed Course Description

Title: Advanced Data Structures and Algorithm Analysis

Short Title: ADV DATA STRUCTURES

Semester Hours of Credit: 3

If lecture/lab, # hrs. of credit for lecture: __  
lab: __

Repeat Credit Max (if repeatable): __  
X

Graduate Credit? Yes: ___  
No: ___

Credit will not be given for this course and: ______

Contact Hours Per Week:
LEC 3  
LAB __  
SEM __  
RES/IND __  
CLIN/PRACT __

Total Weekly Contact Hours: ___3___

Grading System: Letter Grade ___X___  
Pass/Fail ___

Course Description:
Include course number, title, etc. exactly as it will appear in the General Catalog.

3102 Advanced Data Structures and Algorithm Analysis
(3) Prereq.: CSC 1254 or 1351 and credit or concurrent enrollment in CSC 2259 or EE 2740. Description and utilization of formal ADT representations, especially those on lists, sets, and graphs; time and space analysis of recursive and nonrecursive algorithms, including graph and sorting algorithms; algorithm design techniques.

These questions must be answered completely and accurately or proposal will be returned.

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

Is this course included in any curricula, concentrations, or minors? Yes (X)  
No ( )  
If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses? Yes (X)  
No ( )  
If yes, list courses; use separate sheet.

Is this course on the General Education list? Yes ( )  
No (X)

Justification/Explanation: Use separate sheet.

Note: If course is or will be cross-listed, separate forms must be submitted by each department.

Approvals:
Department Faculty Approval Date 3-5-2012  
Department Chair's Signature 9-19-2012

College Faculty Approval Date 10/1/12  
College Dean's Signature 10/1/12

Graduate Dean's Signature 10/1/12

Academic Affairs Approval 10/1/12
Change: 3102 Advanced Data Structures and Algorithm Analysis

1. To drop the prerequisite of EE 2720
2. To add the prerequisite of EE 2740

Required Curricula:
1. Computer Science minor
2. Computer Science degree program – all concentrations
3. Computer Engineering degree program

Prerequisite:
1. CSC 3991
2. CSC 4101
3. CSC 4103
4. CSC 4263
5. CSC 4330
6. CSC 4402
7. CSC 4444
8. CSC 4601
9. CSC 4700
10. CSC 7375
11. CSC 7420
12. CSC 7450
13. CSC 7481
14. EE 4760
15. EE 4790
16. EE 7780

Justification:
The Department of Electrical Engineering (EE) has changed its course offerings. A new course EE 2740 (3) Digital Logic is replacing EE2720 (2) Digital Logic I and EE 2730 (2) Digital Logic 2. The prerequisite list for CSC 3102 has been changed to reflect the newly proposed course. The prerequisite list for CSC 3102 includes EE 2740 because students acquire required knowledge in the course needed in CSC 3102. The prerequisite of EE 2740 facilitates auto-prerequisite checking for electrical engineering and computer engineering students enrolling in CSC 3102.
Date: Fri, 24 Feb 2012 09:10:04 -0600
From: "John D Scalzo" <jscalz1@lsu.edu>
To: "Coretta Douglas" <douglas@csc.lsu.edu>
Subject: EEC curriculum changes

Coretta,

The computer engineering curriculum is undergoing a significant revision. A few of these changes require your attention:

1.) A new course EE 2740 Digital Logic (3) is replacing EE 2720 Digital Logic 1 (2) and EE 2730 Digital Logic 2 (2). 2720 and 2730 will be deleted. The new course combines the two old courses. Content relating to hardware description language (HDL) is being moved into a new required course for the computer engineering curriculum EE 4755 Digital Design using Hardware Description Languages.

As a result the prerequisite for CSC 3102 must be changed.

2.) A new course EE 3752 Microprocessor Systems (3) is replacing EE 3750 Microprocessor Systems (2) and EE 3751 Microprocessor Laboratory (2). 3750 and 3751 will be deleted. The new course combines the lecture and the lab without removing any content.

As a result the prerequisite for CSC 3501 must be changed.

3.) The course number for EE 4710 Communications in Computing is changing to EE 3710 Communications in Computing. The content of the new course remains the same. This course is now required for the computer engineering curriculum.

John Scalzo
Electrical and Computer Engineering
Instructor, Undergraduate Advisor
Rector, Engineering Residential College
102 F Electrical Engineering
(225) 578-5478
http://www.ece.lsu.edu/scalzo/index.html
### Request for CHANGING an Existing Course

**Department:** Computer Science & Eng.  
**College:** Engineering  
**Course Rubric and #:** CSC 3501  
**Date:** 9/19/2012

#### Present Course Description

- **Title:** Computer Organization and Design
- **Semester Hours of Credit:** 3
  - If lecture/lab, # hrs. of credit for lecture: ____  
    - lab: ____
  - Repeat Credit Max (if repeatable): ____
  - Graduate Credit? Yes: ____  
    - No: ____

Credit will not be given for this course and:
- **CSC 2280, EE 3750, EE 3755**

Contact Hours Per Week (from ACM):
- **LEC 3**  
- **LAB ___**  
- **SEM ___**  
- **RES/IND ___**  
- **CLIN/PRACT ___**  

Total Weekly Contact Hours: ____

Grading System: Letter Grade __X__  
Pass/Fail ____

Course Description:

CSC3501 Computer Organization and Design (3)  
Prereq.: CSC2259. Credit will not be given for both this course and CSC 2280 or EE 3750 or 3755. Computer arithmetic, design of high-speed adders and multipliers, CPU concepts, instruction fetching and decoding, hardwired control, microprogramming control, main memory, I/O organization, assembly language programming techniques, CPU instruction sets and addressing modes.

#### Proposed Course Description

- **Title:** Computer Organization and Design
- **Semester Hours of Credit:** 3
  - If lecture/lab, # hrs. of credit for lecture: ____  
    - lab: ____
  - Repeat Credit Max (if repeatable): ____
  - Graduate Credit? Yes: ____  
    - No: ____

Credit will not be given for this course and:
- **EE 3752, EE 3755**

Contact Hours Per Week:
- **LEC 3**  
- **LAB ___**  
- **SEM ___**  
- **RES/IND ___**  
- **CLIN/PRACT ___**  

Total Weekly Contact Hours: ____

Grading System: Letter Grade __X__  
Pass/Fail ____

Course Description:

CSC3501 Computer Organization and Design (3)  
Prereq.: CSC2259. Credit will not be given for both this course and EE 3750 or 3752 or 3755. Computer arithmetic, design of high-speed adders and multipliers, CPU concepts, instruction fetching and decoding, hardwired control, microprogramming control, main memory, I/O organization, assembly language programming techniques, CPU instruction sets and addressing modes.

These questions must be answered completely and accurately or proposal will be returned.

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

Is this course included in any curricula, concentrations, or minors?  
Yes (X)  No ( )  If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses?  
Yes ( )  No (X)  If yes, please list on a separate sheet.

Is this course on the General Education list?  
Yes ( )  No (X)  If yes, list courses; use separate sheet.

JUSTIFICATION/EXPLANATION:  
Use separate sheet.

Note: If course is or will be cross-listed, separate forms must be submitted by each department.

**APPROVALS:**

- **Department Faculty Approval Date:** 3-5-2012  
- **Department Chair's Signature:** (Date)

- **College Faculty Approval Date:** 10/11/12  
- **College Dean's Signature:** (Date)

- **Graduate Dean's Signature:** (Date)

- **Chair, FS C & C Committee:** 10/8/12  
- **Academic Affairs Approval:** (Date)
Change:
1. Drop the reference to CSC 2280 in the list of classes for which students may not receive dual credit.
2. Add EE 3752 to the list of classes for which students may not receive dual credit.

Required Curricula:
1. Computer Science minor
2. Computer Science major – all concentrations

Prerequisite/corequisite: none

Justification:
The computer science curriculum combined two courses (CSC 2252 and 2280) to create the course CSC 3501. During the transition to the new course, the catalog included the statement that students could not receive credit in both CSC 3501 and CSC 2280. (CSC 2252 content contributed marginally to the newly created CSC 3501 course and so it was not explicitly stated.) CSC 2280 is now obsolete and to be deleted from the LSU General Catalog.

Electrical Engineering (EE) is replacing EE 3750 (2) and EE 3751 (2) with a new course EE 3752 (3) Microprocessor Systems. The list of courses for which students may not receive dual credit for CSC 3501 is being changed to reflect the newly proposed course. The reference to EE 3750 in the catalog description will be deleted when the likelihood that students will enroll in both CSC 3501 and EE 3750 will have diminished.
Date: Fri, 24 Feb 2012 09:10:04 -0600
From: "John D Scalzo" <jscalz1@lsu.edu>
To: "Coretta Douglas" <douglas@csc.lsu.edu>
Subject: EEC curriculum changes

Coretta,

The computer engineering curriculum is undergoing a significant revision. A few of these changes require your attention:

1.) A new course EE 2740 Digital Logic (3) is replacing EE 2720 Digital Logic 1 (2) and EE 2730 Digital Logic 2 (2). 2720 and 2730 will be deleted. The new course combines the two old courses. Content relating to hardware description language (HDL) is being moved into a new required course for the computer engineering curriculum EE 4755 Digital Design using Hardware Description Languages

As a result the prerequisite for CSC 3102 must be changed.

2.) A new course EE 3752 Microprocessor Systems (3) is replacing EE 3750 Microprocessor Systems (2) and EE 3751 Microprocessor Laboratory (2). 3750 and 3751 will be deleted. The new course combines the lecture and the lab without removing any content.

As a result the prerequisite for CSC 3501 must be changed.

3.) The course number for EE 4710 Communications in Computing is changing to EE 3710 Communications in Computing. The content of the new course remains the same. This course is now required for the computer engineering curriculum.

John Scalzo

Electrical and Computer Engineering
Instructor, Undergraduate Advisor
Rector, Engineering Residential College
102 F Electrical Engineering
(225)578-5478
http://www.ece.lsu.edu/scalzo/index.html
Request for CHANGING an Existing Course

Department Philosophy and Religious Studies

Course Rubric and # PHIL 2020

Present Course Description

Title Ethics

Semester Hours of Credit 3

If combination course type, # hrs. of credit for lecture: ____________
If combination course type, # hrs. of credit for lab/sem: ____________
Repeat Credit Max (if repeatable) ________
Graduate Credit? Yes: ________ No: ________
Credit will not be given for this course and: PHIL 2050
Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC ____________ LAB ____________ SEM ____________ REC ____________ RES/IND ____________ CLIN/PRACT ____________
Total Weekly Contact Hours: ________
Grading System: Letter Grade _X_ Pass/Fail ________

Course Description:
2020 Ethics (3) Classical and recent theories of obligation and value, including works of philosophers such as Plato, Aristotle, Kant, Hume, and Nietzsche; topics including freedom, rights, justification of moral judgments.

Proposed Course Description

Title Ethics

Short Title ETHICS

Semester Hours of Credit 3

If combination course type, # hrs. of credit for lecture: ____________
If combination course type, # hrs. of credit for lab/sem: ____________
Repeat Credit Max (if repeatable) ________
Graduate Credit? Yes: ________ No: ________
Credit will not be given for this course and: PHIL 2050
Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC ____________ LAB ____________ SEM ____________ REC ____________ RES/IND ____________ CLIN/PRACT ____________
Total Weekly Contact Hours: ________
Grading System: Letter Grade _X_ Pass/Fail ________

Course Description:
2020 Ethics (3) Classical and recent theories of obligation and value, including works of philosophers such as Plato, Aristotle, Kant, Hume, and Nietzsche; topics including freedom, rights, justification of moral judgments.

These questions must be answered completely and accurately or proposal will be returned.

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

Is this course included in any curricula, concentrations, or minors? Yes (x) No ( ) If yes, please list on a separate sheet.

Is this course a prerequisite or corequisite for other courses? Yes (x) No ( ) If yes, list courses; use separate sheet.

Is this course on the General Education list? Yes (x) No ( )

Justification/Explanation: Use separate sheet.

Note: If course is or will be cross-listed, separate forms must be submitted by each department.

Approvals:

Department Faculty Approval Date 9/19/12

[Signature] 9/21/12

Department Chair's Signature (Date)

Graduate Dean's Signature (Date)

College Contact: ________________________________

(Please print name)

College Contact E-mail: ________________________________

College Faculty Approval Date 9/18/12

[Signature] 9/24/12

College Dean's Signature (Date)

Chair, FS C & C Committee (Date)

Academic Affairs Approval (Date)

Rev. 3-2012
Form C addendum for PHIL 2020

Curricula

PHIL 2020 is part of the following curricula: the Philosophy major (one option), the Philosophy minor (one option), the Electrical and Computer Engineering curriculum, the Forestry curriculum, and the Political Discourse Studies curriculum.

Prerequisite

PHIL 2020 is one of three possible prerequisites for PHIL 4945.

Justification/Explanation

We have just added an honors version of this course (PHIL 2050) and do not want students to be able to receive credit for both honors and non-honors versions of the same course.
**Request for CHANGING an Existing Course**

**Department:** Mass Communication

**Collge:**

**Course Rubric and #:** MC 4042

**Date:** 9-25-12

**Effective:** 2013

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### Present Course Description

- **Title:** Mass Media, Sports, and Society

- **Semester Hours of Credit:** 3

### Proposed Course Description

- **Title:** MASS MEDIA & SPORTS

- **Semester Hours of Credit:** 3

---

**Present Course Description**

<table>
<thead>
<tr>
<th>Title</th>
<th>Mass Media, Sports, and Society</th>
</tr>
</thead>
</table>

**Semester Hours of Credit:** 3

- **If combination course type, # hrs. of credit for lecture:** ___

- **lab/sem rec:** ___

- **Repeat Credit Max (if repeatable):** ___

- **Graduate Credit:** Yes: X No: ___

---

**Contact Hours Per Week:** (Indicate hours in appropriate course type.)

- **LEC:** ___

- **LAB:** ___

- **SEM:** ___

- **REC:** ___

- **REM/IND:** ___

- **CLIN/PRAC:** ___

**Total Weekly Contact Hours:** ___

**Grading System:** Letter Grade: X Pass/Fail: ___

**Course Description:**

4042 Mass Media, Sports, and Society (3) Prereq.: Majors only. News coverage of the political, economic and cultural roles of sports institutions and the social roles of professional athletes.

---

**Proposed Course Description**

- **Title:** MASS MEDIA & SPORTS

- **Semester Hours of Credit:** 3

---

**Contact Hours Per Week:** (Indicate hours in appropriate course type.)

- **LEC:** ___

- **LAB:** ___

- **SEM:** ___

- **REC:** ___

- **REM/IND:** ___

- **CLIN/PRAC:** ___

**Total Weekly Contact Hours:** ___

**Grading System:** Letter Grade: X Pass/Fail: ___

**Course Description:**

Include course number, title, etc., exactly as it will appear in the General Catalog.

4042 Mass Media, Sports, and Society (3) Prereq.: Majors only. News coverage of the political, economic and cultural roles of sports institutions and the social roles of professional athletes.

---

**JUSTIFICATION/EXPLANATION:** Use separate sheet.

**Note:** IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

---

**APPROVALS:**

- **Department Faculty Approval Date:** 9/26/12

- **Department Chair's Signature:** O'Bye ___

- **Graduate Dean's Signature:** ___

- **College Contact:** ___

- **College Contact Email:** ___

---

**College Faculty Approval Date:** 9-14-12

- **College Dean's Signature:** ___

- **Chair, FS C & C Committee:** ___

---

**Academic Affairs Approval:** ___

**Date:** 10/18/12
Justification for CHANGING a Course
MC 4042  Mass Media, Sports, and Society

The faculty of the Manship School voted to open up this class to the entire university and not just “majors only.” The faculty feels there is great interest in sports across the student body. This class, taught at the intersection of mass media and sports, would allow for students to view sport from different societal perspectives.
Request for CHANGING an Existing Course

Department: Petroleum Engineering
Course Rubric and #: PETE 4998
College: Engineering
Date: 09/14/12

Present Course Description

Title: Senior Project I

Semester Hours of Credit: 1

If combination course type, # hrs. of credit for lecture: ___ /rec: ___
Repeat Credit Max (if repeatable): ___
Graduate Credit?: Yes: ___ No: X
Credit will not be given for this course and: ___

Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC ___ LAB ___ SEM ___ REC ___ RES/IND ___ CLINI/PRACT ___
Total Weekly Contact Hours: 1
Grading System: Letter Grade X Pass/Fail ___

Course Description:
Include course number, title, etc., exactly as it appears in the General Catalog
4998 Senior Project I (1) Prereq.: Senior status in the College of Engineering. ENGL 2000. Written and oral presentation required. First phase of theoretical and/or experimental investigations of an approved topic in petroleum engineering.

Proposed Course Description

Title: Senior Project I

Semester Hours of Credit: 1

If combination course type, # hrs. of credit for lecture: ___ /rec: ___
Repeat Credit Max (if repeatable): ___
Graduate Credit?: Yes: ___ No: X
Credit will not be given for this course and: ___

Contact Hours Per Week: (Indicate hours in appropriate course type.)
LEC ___ LAB ___ SEM ___ REC ___ RES/IND ___ CLINI/PRACT ___
Total Weekly Contact Hours: 1
Grading System: Letter Grade X Pass/Fail ___

Course Description:
Include course number, title, etc., exactly as it will appear in the General Catalog
4998 Senior Project I (1) Prereq.: ENGL 2000. PETE 3037. Credit or registration in either PETE 4045 or PETE 4051. Written and oral presentation required. First phase of theoretical and/or experimental investigations of an approved topic in petroleum engineering.

THESE QUESTIONS MUST BE ANSWERED COMPLETELY AND ACCURATELY OR PROPOSAL WILL BE RETURNED.

Has this change been discussed with and approved by all departments/colleges affected? Yes () No () N/A (X)
Is this course included in any curricula, concentrations, or minors? Yes (X) No ( ) If yes, please list on a separate sheet.
Is this course a prerequisite or corequisite for other courses? Yes (X) No ( ) If yes, list courses, use separate sheet.
Is this course on the General Education list? Yes ( ) No (X)

JUSTIFICATION/EXPLANATION: Use separate sheet.

Note: IF COURSE IS OR WILL BE CROSS-LISTED, SEPARATE FORMS MUST BE SUBMITTED BY EACH DEPARTMENT.

APPROVALS:
Department Faculty Approval Date: 9/14/12
Kurt Opgen (Signature) (Date)
Department Chair's Signature (Date)
Graduate Dean's Signature (Date)
College Contact: (Please print name.)
College Contact E-mail: ________________

College Faculty Approval Date: 9/17/12
Liza Lauer (Signature) (Date)
College Dean's Signature (Date)
Chair, FS C & C Committee (Date)

Academic Affairs Approval (Date)
Justification

PETE 4998 is a required course in the Petroleum Engineering curriculum only and is a prerequisite course for PETE 4999 (Senior Project II). This change is to add PETE 3037 as a prerequisite to Pete 4998 and either PETE 4051 or PETE 4045 as a co-requisite for PETE 4998.

PETE 3037 is currently the only sophomore or junior level PETE course that is not a prerequisite for another PETE course. That has made it a “swing” course in that students take it when they need an extra credit hour and have the available lab time. Often the students wait and take the course in the senior year for this reason. Many practical petroleum engineering problems are related to production engineering, content that students learn from enrollment in Pete 3037, and the Faculty believes that ensuring that students receive this information prior to taking PETE 4998 is required.

In addition, the requirement that the student be registered in or have taken PETE 4045 or PETE 4051 ensures that the student is truly in the senior year of the Petroleum Engineering program and they are ready for the capstone-like experience that PETE 4998 is supposed to be. If the student is not eligible to be in one of these courses, then they are really in the junior year of the Petroleum Engineering curriculum and they will not be able to graduate within the three semesters. The Faculty believes that the student would be far better off waiting to take PETE 4998 and PETE 4999 when they have had the additional junior classes that prepare them for the projects that they will be doing in PETE 4998 and PETE 4999. This co-requisite definition better defines what the intent of “Senior status in the College of Engineering” meant when originally written.