## PROPOSED COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Rubric &amp; No.</th>
<th>CSC 7090</th>
<th>Title</th>
<th>Design Project (1-9 per sem.)</th>
</tr>
</thead>
</table>

**Short Title (< 19 characters)**

- Semester Hours of Credit: 1-9

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

- Lecture: ____
- Lab/Sem/Rec: ____

**Repeat Credit Max. (if repeatable):**

- 12 credit hours
- Graduate Credit? **Yes**

**Credit will not be given for this course and:**

**Course Type (Indicate hours in the appropriate course type.)**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Lab</th>
<th>Seminar</th>
<th>Recitation</th>
<th>Lec/Rec</th>
<th>Lec/Sem</th>
<th>Lec/Lab</th>
<th>Res/Ind</th>
<th>Clin/Pract</th>
<th>Intern</th>
</tr>
</thead>
<tbody>
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<td>_______</td>
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</tbody>
</table>

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

- 20

**Grading System:**

- Letter Grade: Pass/Fail
- Final Exam: **Yes**

**BUDGET IMPACT (IF ANSWER TO ANY QUESTION IS "YES", ATTACH EXPLANATION.)**

- If this course is approved, will additional staff be needed? **Yes**
- Will additional space, equipment, special library materials or other major expense be involved? **Yes**

**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.)

### REQUEST FOR ADDITION OF NEW COURSE

**Department:** Computer Science & Eng  
**College:** Engineering  
**Date:** February 3, 2015

---

**Course Description:**

**CSC 7090 Design Project (1-9 per sem.)**

Prereq.: permission of department; "S"/"U" grading. Individual design, development, implementation, and documentation of a computer science project addressing a problem in the student's specialization.

---

**BUDGET IMPACT (IF ANSWER TO ANY QUESTION IS "YES", ATTACH EXPLANATION.)**

- If this course is approved, will additional staff be needed? **Yes**
- Will additional space, equipment, special library materials or other major expense be involved? **Yes**

**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 8-28-15  
College Faculty Approval Date 3-10-16  
Department Chair Signature 2-3-2016  
Graduate Dean Signature 4-20-16  
Coretta Douglas douglas@csu.edu  
College Contact E-mail  

---

College Dean Signature 3-9-16  
Chair, FS C&C Committee 4-3-16  
Academic Affairs Approval 5-11-16
ADDENDUM
CSC 7090 Design Project (1-9 per sem.)
Prereq.: permission of department; "S"/"U" grading. Individual design, development, implementation, and documentation of a computer science project involving techniques to a problem in the student’s specialization.

REQUIRED
Master of Science (M.S.) in Computer Science [project option] – required six credit hours

JUSTIFICATION FOR THE CHANGE
Prior to Fall 2015, the Division of Computer Science and Engineering housed two graduate degrees: Systems Science (M.S.) and Computer Science (Ph.D.). In the Fall 2015, final approval was granted through all University and State levels, to change the M.S. program name from “Master in Systems Science” to “Master in Computer Science”.

As with the previous Systems Science M.S. degree requirements, students may select one of two study options for the Computer Science M.S. degree: project or thesis. The curriculum for the M.S. project option requires six credit hours of project credits (CSC 7090).

To reflect the name change in the computer science M.S. program, CSC 7090 will replace SYSC 7090. A short transition time is planned as current students migrate to from the Systems Science M.S. degree plan to the Computer Science M.S. program. The curriculum form for deletion of SYSC 7090 from the LSU General Catalog will be forthcoming when the migration has been completed. Degree requirements are currently approved through a plan-of-study form which supervises the application of perhaps both SYSC 7090 and CSC 7090 credits to the degree for a combined total of six hours required for the project option.

FINAL EXAM WAIVER:
CSC 7090 does not have an exam during the regular examination period. A student is evaluated on the culmination of the project work in an oral final examination in the presence of a faculty committee and through the submission of a final project written report.
Because of the diversity of student work and varying difficulty of student projects and research, setting forth strict grading rubrics for assessment and evaluation, as in a master syllabus, has been difficult for SYSC 7090 and SYSC 8000. Therefore to be fairer in grading and more accurate, the grading for these courses, in the new versions, CSC 7090 and 8000, has been changed to "S"/"U".

Please review the attached independent research form and consider as a substitution for a syllabus.

CSC 7090 and CSC 8000 will replace SYSC 7090 and SYSC 8000 respectively, in the future. We were unsure of the effective date of the change in the rubrics so we opted for using the two separate forms for add/delete. For the Spring 2016 semester, we have students currently enrolled in SYSC 7090 and 8000. Form As for CSC 7090 and CSC 8000 were submitted to the College of Engineering early in the spring 2016 semester, with the intention that the delete forms for SYSC 7090 and SYSC 8000 would follow at the end of the semester to be effective fall 2016.
Division of Computer Science & Engineering
Graduate PROJECT and/or RESEARCH
Student Plan of Study

STUDENT INFORMATION
REQUEST DATE: ________________  PROFESSOR: __________________
NAME: ___________________________  LSU ID NUMBER: ______________
MAJOR: ___________________________
OTHER: ___________________________
CONTACT EMAIL: __________________
CONTACT PHONE: __________________

COURSE REQUEST
SEMESTER (FALL, SPRING, SUMMER): ______  YEAR: ______
COURSE: CSC 7090 [ ]  7999 [ ]  8000 [ ]  9000 [ ]  CREDIT HOURS: ______
NOTE: CSC 7090 (Project Option) and CSC 8000 (Thesis Option) are designated for
the Masters in Computer Science
CSC 7999 Maximum credit hours are restricted as applied to the degree
CSC 9000 Dissertation Research reserved for doctoral students

BACKGROUND

COURSEWORK PERTINENT TO RESEARCH AREA:

PRIOR RESEARCH EXPERIENCE:

INTERNSHIPS:

OTHER:
RESEARCH PROPOSAL (Attach separate paper if needed)

PROPOSAL TITLE:

PROPOSAL SUMMARY
SUMMARY:

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>DELIVERABLES (proposal, paper, reports, projects, presentations)</th>
<th>TIMELINE</th>
<th>COMPLETION DATE</th>
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<tbody>
<tr>
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</tbody>
</table>

CONTRACT
STUDENTNAME (PRINT):
STUDENT SIGNATURE: DATE:
PROFESSOR NAME (PRINT): PROFESSOR SIGNATURE: DATE:
For Professor Only

COMMENTS

FINAL GRADE
Satisfactory/Unsatisfactory: S / U
JUSTIFICATION:
**PROPOSED COURSE DESCRIPTION**

<table>
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<th>Rubric &amp; No.</th>
<th>CSC 8000</th>
<th>Title</th>
<th>Thesis Research (1-12)</th>
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<th>Short Title (≤ 19 characters)</th>
<th>T H E S I S</th>
<th>R E S E A R C H</th>
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<th>Semester Hours of Credit</th>
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<tr>
<th>If combination course type, # hrs. of credit for</th>
<th>Lecture:</th>
<th>Lab/Sem/Rec:</th>
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<table>
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<tr>
<th>Repeat Credit Max. (if repeatable):</th>
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<tr>
<th>Graduate Credit?</th>
<th>Yes</th>
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<table>
<thead>
<tr>
<th>Credit will not be given for this course and:</th>
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<table>
<thead>
<tr>
<th>Course Type (Indicate hours in the appropriate course type.)</th>
<th>Lecture</th>
<th>Lab</th>
<th>Seminar</th>
<th>Recitation</th>
<th>Lec/Rec</th>
<th>Lec/Sem</th>
<th>Lec/Lab</th>
<th>Res/Ind</th>
<th>Clin/Pract</th>
<th>Intern</th>
</tr>
</thead>
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<table>
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<th>Maximum enrollment per section: (use integer, e.g. 25 not 20-30)</th>
<th>20</th>
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</table>

<table>
<thead>
<tr>
<th>Grading System:</th>
<th>Letter Grade</th>
<th>Pass/Fail X (S/U)</th>
<th>Final Exam:**</th>
<th>Yes ____</th>
<th>No X</th>
</tr>
</thead>
</table>

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

**Course Description:**

**CSC 8000 Thesis Research (1-12 per sem.)**

*Prereq.: permission of department. "S"/"U" grading.*

---

**BUDGET IMPACT (IF ANSWER TO ANY QUESTION IS "YES", ATTACH EXPLANATION.)**

<table>
<thead>
<tr>
<th>If this course is approved, will additional staff be needed?</th>
<th>Yes ____</th>
<th>No X</th>
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</thead>
</table>

| Will additional space, equipment, special library materials or other major expense be involved? | Yes ____ | No X |

<table>
<thead>
<tr>
<th>Academic Affairs Approval:</th>
<th>(Date)</th>
</tr>
</thead>
</table>

**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).

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**APPROVALS**

<table>
<thead>
<tr>
<th>Department Faculty Approval Date</th>
<th>August 28, 2015</th>
<th>College Faculty Approval Date</th>
<th>3/10/16</th>
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<table>
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<tr>
<th>Department Chair Signature</th>
<th>2-3-2016</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Graduate Dean Signature</th>
<th>5/13/16</th>
</tr>
</thead>
</table>

**Coretta Douglas douglas@csc.lsu.edu**

**College Contact**

**E-mail**
CSC 8000

ADDITION
CSC 8000 Thesis Research (1-12 per sem.) Prereq.: permission of department. “S”/“U” grading.

REQUIRED
Master of Science (M.S.) in Computer Science [thesis option] – required twelve credit hours

JUSTIFICATION FOR THE CHANGE
Prior to Fall 2015, the Division of Computer Science and Engineering housed two graduate degrees: Systems Science (M.S.) and Computer Science (Ph.D.). In the Fall 2015, final approval was granted through all University and State levels, to change the M.S. program name from “Master in Systems Science” to “Master in Computer Science”.

As with the previous Systems Science M.S. degree requirements, students may select one of two study options for the Computer Science M.S. degree: Project or Thesis. The curriculum for the M.S. thesis option requires twelve credit hours of research credits (CSC 8000).

To reflect the name change in the computer science M.S. program, CSC 8000 will replace SYSC 8000. A short transition time is planned as current students migrate to from the Systems Science M.S. degree plan to the Computer Science M.S. program. The curriculum form for deletion of SYSC 8000 from the LSU General Catalog will be forthcoming when the migration has been completed. Degree requirements are currently approved through a plan-of-study form which supervises the application of perhaps both SYSC 8000 and CSC 8000 credits to the degree for a combined total of twelve hours required for the thesis option.

FINAL EXAM WAIVER:
CSC 8000 does not have an exam during the regular examination period. A student is evaluated on the culmination of the research in an oral final examination in the presence of a faculty committee and through the submission of a final written thesis that is archived through ETD.
In the past, CSE has not supplied syllabi for research courses as part of the submission process for curriculum materials. However, we understand that policy changes. The student work (quantity and quality) required for the awarding of research credit is at the discretion of the professor. The student and the professor work together to set goals and objectives for the effort. However, we do have an in-house form as a guide for both our undergraduate and graduate research courses: CSC 3999, 4999, 7999, 9000 and CSC 7090 (Project) and CSC 9000 (Thesis) See the attached form for the plan of study for our graduate research courses.

Because of the diversity of student work and varying difficulty of student projects and research, setting forth strict grading rubrics for assessment and evaluation, as in a master syllabus, has been difficult for SYSC 7090 and SYSC 8000. Therefore to be fairer in grading and more accurate, the grading for these courses, in the new versions, CSC 7090 and 8000, has been changed to "S"/"U". Please review the attached independent research form and consider as a substitution for a syllabus.
Division of Computer Science & Engineering
Graduate PROJECT and/or RESEARCH
Student Plan of Study

STUDENT INFORMATION
REQUEST DATE: __________________ PROFESSOR: __________________
NAME: ___________________________ LSU ID NUMBER: _____________
MAJOR: __________________________
OTHER: __________________________
CONTACT EMAIL: __________________
CONTACT PHONE: __________________

COURSE REQUEST
SEMESTER (FALL, SPRING, SUMMER): _____ YEAR: _____
COURSE: CSC 7090 ☐ 7999 ☐ 8000 ☐ 9000 ☐ CREDIT HOURS: _____
NOTE: CSC 7090 (Project Option) and CSC 8000 (Thesis Option) are designated for the Masters in Computer Science
CSC 7999 Maximum credit hours are restricted as applied to the degree
CSC 9000 Dissertation Research reserved for doctoral students

BACKGROUND

COURSEWORK PERTINENT TO RESEARCH AREA:

PRIOR RESEARCH EXPERIENCE:

INTERNSHIPS:

OTHER:
**RESEARCH PROPOSAL** *(Attach separate paper if needed)*

**PROPOSAL TITLE:**

**PROPOSAL SUMMARY**

**SUMMARY:**

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<tr>
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</tbody>
</table>

**CONTRACT**

STUDENTNAME (PRINT):

STUDENT SIGNATURE: DATE:

PROFESSOR NAME (PRINT):

PROFESSOR SIGNATURE: DATE:
For Professor Only

COMMENTS

FINAL GRADE

Satisfactory/Unsatisfactory: S / U

JUSTIFICATION:
Malcolm Richardson
Associate Dean; Taylor Professor of English
College of Humanities and Social Sciences
Louisiana State University
132B Hodges, Baton Rouge, LA 70803
office 225-578-1856 | fax 225-578-6447
enmric@lsu.edu | lsu.edu | www.lsu.edu/hss/english/people/richardson.php
### COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Rubric &amp; No.</th>
<th>EE 4430</th>
<th>Title</th>
<th>Power System Analysis</th>
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<tbody>
<tr>
<td>Semester</td>
<td></td>
<td>Hours of Credit</td>
<td>3</td>
</tr>
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</table>

**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.*

<table>
<thead>
<tr>
<th>NA</th>
<th></th>
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</thead>
</table>

Is this course a prerequisite or corequisite for any other courses? (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.)

Yes ___ No ___ X

<table>
<thead>
<tr>
<th>Rubric</th>
<th>Course #</th>
<th>Rubric</th>
<th>Course #</th>
<th>Rubric</th>
<th>Course #</th>
<th>Rubric</th>
<th>Course #</th>
</tr>
</thead>
</table>

Is this course on the general education list? If yes, attach approval of drop from General Education Committee

Yes ___ No ___ X

**REASON FOR REQUEST TO DROP COURSE:**

The course was last taught in Spring 2010, and is being replaced. In conjunction with this course being dropped, the addition EE 4412 is proposed.

---

### APPROVALS

<table>
<thead>
<tr>
<th>Department Faculty Approval Date</th>
<th>College Faculty Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z. J. 4-30-15</td>
<td>Z. J. 4-30-15</td>
</tr>
</tbody>
</table>

Department Chair Signature (date)

Graduate Dean Signature (date)

College Contact E-mail

College Dean Signature (date)

Chair of Board Committee

Academic Affairs Approval (date)
REQUEST FOR DROPPING A COURSE

Department: Biol & Agr Engineering  
College: Engineering  
Date: February 15, 2016

COURSE DESCRIPTION

<table>
<thead>
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<th>Rubric &amp; No.</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BE 1250</td>
<td>Introduction to Engineering Methods</td>
</tr>
</tbody>
</table>

Semester Hours of Credit

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.)

Biological Engineering

Is this course a prerequisite or corequisite for any other courses? (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.)

<table>
<thead>
<tr>
<th>Rubric</th>
<th>Course #</th>
<th>Rubric</th>
<th>Course #</th>
<th>Rubric</th>
<th>Course #</th>
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</tbody>
</table>

Is this course on the general education list? If yes, attach approval of drop from General Education Committee

Yes X  No

REASON FOR REQUEST TO DROP COURSE:

This course has been replaced by BE 1251.

APPROVALS

Department Faculty Approval Date: February 15, 2016  
College Faculty Approval Date: 3/11/16

Department Chair Signature: 2/23/16  
Graduate Dean Signature:  

College Contact: Richard Bengtson  
E-mail: bengtson@lsu.edu

Chair, FS C&C Committee:  
Academic Affairs Approval: 5/7/16
### PRESENT COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>Selected Readings in Computer Science (1-3)</th>
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</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>1-3 per semester</td>
</tr>
<tr>
<td>If combination course type, # hrs. of credit for</td>
<td></td>
</tr>
<tr>
<td>Lecture:</td>
<td>Lab/Sem/Rec:</td>
</tr>
<tr>
<td>Repeat Credit Max. (if repeatable):</td>
<td>6</td>
</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Credit will not be given for this course and:

- Contact Hours Per Week: (Indicate hours in appropriate course type.)
  - Lecture: ___
  - Lab: ___
  - Seminar: ___
  - Recitation: ___
  - Intern: ___
  - Res/Ind: ___
  - Clin/Pract: ___

- Total Weekly Contact Hours: ___

- Grading System: Letter Grade X
  - Pass/Fail

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

CSC 7999 Selected Readings in Computer Science (1-3) Prereq.: consent of department chair. May be taken for a max of 6 sem. hrs. credit.

### PROPOSED COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>Selected Readings in Computer Science (1-3)</th>
</tr>
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<tbody>
<tr>
<td>Short Title</td>
<td>SEL READINGS IN CSC</td>
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<tr>
<td>Semester Hours of Credit</td>
<td>1-3 per semester</td>
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<td>If combination course type, # hrs. of credit for</td>
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<tr>
<td>Lecture:</td>
<td>Lab/Sem/Rec:</td>
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<tr>
<td>Repeat Credit Max. (if repeatable):</td>
<td>6</td>
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<tr>
<td>Graduate Credit?</td>
<td>Yes</td>
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</table>

Credit will not be given for this course and:

- Contact Hours Per Week: (Indicate hours in appropriate course type.)
  - Lecture: ___
  - Lab: ___
  - Seminar: ___
  - Recitation: ___
  - Intern: ___
  - Res/Ind: ___
  - Clin/Pract: ___

- Total Weekly Contact Hours: ___

- Grading System: Letter Grade X
  - Pass/Fail X "S"/"U"

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

CSC 7999 Selected Readings in Computer Science (1-3) Prereq.: "S"/"U" grading. consent of department. May be taken for a max of 6 sem. hrs. credit.

---

**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 N/A
- Is this course a prerequisite or corequisite for other courses? Yes X No
- 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**

<table>
<thead>
<tr>
<th>Department Faculty Approval Date</th>
<th>Jan. 12, 2016</th>
<th>College Faculty Approval Date</th>
<th>3/10/16</th>
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<tbody>
<tr>
<td>Department Chair Signature (date)</td>
<td>2-3-2016</td>
<td>College Dean Signature (date)</td>
<td>3-9-16</td>
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<tr>
<td>Graduate Dean Signature (date)</td>
<td>4/20/16</td>
<td>Chair, FS C &amp; C Committee</td>
<td>4/2016</td>
</tr>
<tr>
<td>Coretta Douglas, <a href="mailto:douglas@csu.isu.edu">douglas@csu.isu.edu</a></td>
<td></td>
<td>Academic Affairs Approval (date)</td>
<td>5/2/16</td>
</tr>
</tbody>
</table>

**College Contact E-mail**
CSC 7999 — Change

CURRENT
CSC 7999 Selected Readings in Computer Science (1-3) Prereq.: consent of department chair. May be taken for a max of 6 sem. hrs. credit.

PROPOSED
CSC 7999 Selected Readings in Computer Science (1-3) Prereq.: "S"/"U" grading. consent of department. May be taken for a max of 6 sem. hrs. credit.

CHANGES
(1) To require permission of the department only and not department of the chair
(2) To revise the grading from letter grade to satisfactory/unsatisfactory ("S"/"U")

JUSTIFICATION FOR THE CHANGE
The Computer Science and Engineering Division is proposing the "S"/"U" grading for multiple reasons:
1. Establishing consistent and adequate rubrics at the fine-grain level of a letter grade is difficult due to varying expectations of both the individual student and the assigned faculty member.
2. Registration in CSC 7999 may be used to explore a research topic broadly in order to develop foundational understanding, albeit at the graduate level. At other times, the faculty and student may set a finished project or unique experiment as a primary goal. Determining a fair grading rubric is difficult when goals are so diverse.
3. Assigning a letter grade may be subjectively awarded based on the difficulty of the subject and the skill/knowledge needed to master the content.
4. Results are difficult to quantify as often the work is the result of collaboration between one faculty member and one student.
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CURRICULUM

Department: Petroleum Engineering
College: Engineering
Name of Curriculum/Major: Petroleum Engineering
Type of Degree: BS
Date: 03/07/16

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.]
ATTACH FORM D ADDENDUM for all new curricula or changes involving General Education courses.

ACTION (check appropriate box):

( ) ADDING: The entire new curriculum, by semester, must be typed on plain sheets and attached to Form D. (See sample layout attached.)

( X ) CHANGING: Regardless if all semesters of a curriculum are to be changed or only parts, the present and proposed (eight-semester) recommended path should be attached on separate pages. On the Present recommended path, use strikeout and on the Proposed recommended path, highlight areas to identify deletions and additions. Do not use boldface to designate changes as boldface is reserved for critical requirements within the recommended path. 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: 128</td>
<td>Total semester hours in proposed curriculum: 128</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date 3/8/2016

Department Chair's Signature: [Signature] 3/8/2016

Chair, FS C & C Committee: [Signature] 4/20/16

College Faculty Approval Date 4/4/16

College Dean's Signature: [Signature] 4/18/16

Academic Affairs Approval (Date) 5/16

Contact E-mail: [Please print name.]
## GENERAL EDUCATION REQUIREMENTS

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

<table>
<thead>
<tr>
<th>General Education Requirement</th>
<th>Course(s)</th>
<th>Credit Hours</th>
<th>Curriculum Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
<td>3</td>
<td>(x) 1&lt;sup&gt;st&lt;/sup&gt; (x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>ENGL 2000</td>
<td>3</td>
<td>(x) 1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Analytical Reasoning (6 hrs.)</td>
<td>General Education analytical reasoning course (from mathematics department) MATH 1550</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>(At least 3 hours credit must be from a MATH course.)</td>
<td>General Education analytical reasoning course MATH 1552</td>
<td>3</td>
<td>(x) 6&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Arts (3 hrs.)</td>
<td>General Education arts course ANY APPROVED GEN ED ART COURSE</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Humanities (9 hrs.)</td>
<td>General Education humanities course ANY APPROVED GEN ED HUM COURSE</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>(If 2 course sequence is taken in the physical sciences, the additional 3 hour course must be from the life sciences, and vice versa.)</td>
<td>General Education humanities course ANY APPROVED GEN ED HUM COURSE</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Natural Sciences (9 hrs.)</td>
<td>General Education natural science course sequence CHEM 1201, 1202</td>
<td>6</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>(At least three hours at the 2000-level.)</td>
<td>General Education natural science course ANY APPROVED GEN ED LIFE SCIENCE COURSE</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Social Sciences (6 hrs.)</td>
<td>General Education social science course ANY APPROVED GEN ED SOCIAL SCIENCE COURSE</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>(At least three hours at the 2000-level.)</td>
<td>General Education social science course (2000-level) ECON 2030</td>
<td>3</td>
<td>(x) 5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
RECOMMENDED WORDING FOR GENERAL EDUCATION REQUIREMENTS

Departments and programs should employ the following wording where possible to ensure consistency across curricula in the description of General Education requirements.

* If 2 course natural science sequence is taken in the physical sciences, the additional 3 hour natural science course must be from the life sciences, and vice versa.

**English Composition**
English 1001 or 1004 ................................................................. 3
English 2000 ........................................................................... 3

**Natural Sciences**
General education natural science course sequence ........................................ 6
General education natural science course* ..................................................... 3

**Social Sciences**
General education social science course ..................................................... 3
General education social science course (2000-level) .................................... 3

**Analytical Reasoning**
General education analytical reasoning course (from mathematics department).... 3
General education analytical reasoning course ............................................... 3

**Humanities**
General education humanities course ....................................................... 3
General education humanities course ....................................................... 3
General education humanities course ....................................................... 3

**Arts**
General education arts course ............................................................... 3
Justification (PETE 4058 and Form D)

This course is a required course in the PETE Curriculum only

This course is not a prerequisite for any other courses in the curriculum

Reservoir Mechanics laboratory has been a Spring course for a great many years at LSU but the laboratory space in the remodeled Patrick Taylor Hall has been reworked such that PETE 4058 will be sharing space with PETE 2034 which is also a Spring course. The two laboratory courses cannot run concurrently and PETE 2034 has prerequisite and corequisite courses that mandate that it remain in the Spring semester. PETE 4058 is primarily a flow-based laboratory and moving it closer to when students take the Reservoir Dynamics class (PETE 3050) should enhance student learning in the laboratory. In addition, with the current Spring course, most of the students have not seen several of the laboratory experiments that are tied to flow modeling of those experiments that is done in PETE 4056. Again, moving PETE 4058 to the Fall semester means that nearly all students in PETE 4056 will have seen those experiments and can compare the outcome of the actual experiments to the simulation results and enhance their understanding of both the experiments and the simulations.
PRESENT

ADMISSION to the B.S. in Petroleum Engineering curriculum requires that a student be admissible to the College of Engineering and have at least 24 semester hours and a minimum 2.8 GPA in all courses that apply to the petroleum engineering degree.

CURRICULUM IN PETROLEUM ENGINEERING

TOTAL SEM. HRS. = 128

Mathematics 1550, 1552, and Physics 2110, 2112, 2113, and PETE 2031, and CE 2450 each require a grade of "C" or better before a student may register for any 3000-level petroleum engineering course.

Lists of approved courses for the Technical Elective, GEOL Elective and PETE Design Electives are available from the department.

General education required courses (*).

CRITICAL REQUIREMENTS

Sem 1: MATH 1021.
Sem 2: MATH 1022 or MATH 1023.
Sem 3: GEOL 1001.
Sem 4: "C" or better in MATH 1550.
Sem 5: "C" or better in PHYS 2110.

RECOMMENDED PATH

Semester 1
Critical: Math 1021.
CHEM 1201 General Chemistry I* 3
ENGL 1001 English Composition* 3
GEOL1001 General Geology: Physical 3
GEOL1601 Physical Geology Laboratory 1
PETE 1010 Introduction to Petroleum Engineering 1
MATH 1550 Analytic Geometry and Calculus I* 5
Total Semester Hours: 17

Semester 2
Critical: MATH 1022 or Math 1023.
CHEM 1202 General Chemistry II* 3
CHEM 1212 General Chemistry Laboratory 2
*General Education Course – Life Science* 3
MATH 1552 Analytic Geometry and Calculus II* 4
PHYS 2110 Particle Mechanics* 3
Total Semester Hours: 15

Semester 3
Critical: GEOL 1001.
PETE 2060 Computational Methods in Petroleum Engineering 2
MATH 2065 Elementary Differential Equations 3
CE 2450 Statics 3
PETE 2031 Reservoir Rock Properties 3
PHYS 2112 Fluids, Thermodynamics, Waves and Modern Physics 3
General Education Course – Arts* 3
Total Semester Hours: 17

Semester 4
Critical: "C" or better in MATH 1550.
ECON 2030 Economic Principles* 3
PHYS 2113 Fields: Gravity, Electricity and Magnetism 3
IE 3302 Engineering Statistics 3
PETE 2032 Reservoir Fluid Properties 3
PETE 2034 Rock and Fluid Properties Laboratory 1
CE 2200 Fluid Mechanics 3
Total Semester Hours: 16

Semester 5
Critical: "C" or better in PHYS 2110.
PETE 3050 Reservoir Dynamics 3
ME 3333 Thermodynamics 3
PETE 3025 Economic Aspects of Petroleum Production 3
PETE 3036 Well Logging 3
PETE 3037 Petroleum Field Operations 1
Approved GEOL Elective 3
Total Semester Hours: 16

Semester 6
CE 3400 Mechanics of Materials 3
PETE 4060 Prevention of Oil and Gas Well Blowouts 1
PETE 3033 Petroleum Engineering Aspects of Subsurface Geology 3
PETE 3085 Well Performance and Production* 3
ENGL 2000 English Composition* 3
Approved Technical Elective 3
Total Semester Hours: 16

Semester 7
PETE 4051 Reserve Estimation and Reservoir Management 3
PETE 4045 Drilling Engineering 3
PETE 4039 Drilling Fluids Laboratory 1
PETE 4998 Senior Project I 1
General Education Courses – Humanities* 3
PETE Design Course 3
Total Semester Hours: 17

Semester 8
PETE Design Courses 6
PETE 4052 Reservoir Mechanics Laboratory 1
PETE 4999 Senior Project II 1
General Education Courses – Social Sciences* 3
General Education Courses – Humanities* 3
Total Semester Hours: 14
PROPOSED

ADMISSION to the B.S. in Petroleum Engineering curriculum requires that a student be admitted to the College of Engineering with at least 24 semester hours and have a minimum 2.8 GPA in all courses that apply to the petroleum engineering degree.

CURRICULUM IN PETROLEUM ENGINEERING

TOTAL SEM. HRS. • 128

Mathematics 1550, 1552, and Physics 2110, 2112, 2113, and PETE 2031, and CE 2450 each require a grade of "C" or better before a student may register for any 3000-level petroleum engineering course. Lists of approved courses for the Technical Elective, GEOL Elective and PETE Design Electives are available from the department.

General education required courses (*).

CRITICAL REQUIREMENTS

Sem 1: MATH 1021.
Sem 2: MATH 1022 or MATH 1023.
Sem 3: GEOL 1001.
Sem 4: "C" or better in MATH 1550.
Sem 5: "C" or better in PHYS 2110.

RECOMMENDED PATH

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Critical: Math 1021.</th>
</tr>
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<tbody>
<tr>
<td>CHEM 1201 General Chemistry I*</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001 English Composition*</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 100 General Geology: Physical</td>
<td>3</td>
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<tr>
<td>GEOL 1001 Physical Geology Laboratory</td>
<td>1</td>
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<tr>
<td>PETE 1010 Introduction to Petroleum Engineering</td>
<td>2</td>
</tr>
<tr>
<td>MATH 1550 Analytic Geometry and Calculus I*</td>
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<tr>
<td><strong>Total Semester Hours:</strong></td>
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<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Critical: MATH 1022 or Math 1023.</th>
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<tbody>
<tr>
<td>CHEM 1202 General Chemistry II*</td>
<td>3</td>
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<tr>
<td>CHEM 1212 General Chemistry Laboratory</td>
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<tr>
<td><em>General Education Course – Life Science</em></td>
<td>3</td>
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<tr>
<td>MATH 1552 Analytic Geometry and Calculus II*</td>
<td>4</td>
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<tr>
<td>PHYS 2110 Particle Mechanics*</td>
<td>3</td>
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<td><strong>Total Semester Hours:</strong></td>
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<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Critical: GEOL 1001.</th>
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<tr>
<td>PETE 2060 Computational Methods in Petroleum Engineering</td>
<td>2</td>
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<tr>
<td>MATH 2065 Elementary Differential Equations</td>
<td>3</td>
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<td>CE 2450 Statics</td>
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<td>PETE 2031 Reservoir Rock Properties</td>
<td>3</td>
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<tr>
<td>PHYS 2112 Fluids, Thermodynamics, Waves and Modern Physics</td>
<td>3</td>
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<tr>
<td><em>General Education Course – Arts</em></td>
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<table>
<thead>
<tr>
<th>Semester 4</th>
<th>Critical: &quot;C&quot; or better in MATH 1550.</th>
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<tbody>
<tr>
<td>ECON 2030 Economic Principles*</td>
<td>3</td>
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<tr>
<td>PHYS 2113 Fields: Gravity, Electricity and Magnetism</td>
<td>3</td>
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<tr>
<td>IE 3302 Engineering Statistics</td>
<td>3</td>
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<tr>
<td>PETE 2032 Reservoir Fluid Properties</td>
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<td>PETE 2034 Rock and Fluid Properties Laboratory</td>
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<td>CE 2200 Fluid Mechanics</td>
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<tr>
<th>Semester 5</th>
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<tbody>
<tr>
<td>PETE 3050 Reservoir Dynamics</td>
<td>3</td>
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<tr>
<td>ME 3333 Thermodynamics</td>
<td>3</td>
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<tr>
<td>PETE 3025 Economic Aspects of Petroleum Production</td>
<td>3</td>
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<tr>
<td>PETE 3036 Well Logging</td>
<td>3</td>
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<tr>
<td>PETE 3037 Petroleum Field Operations</td>
<td>1</td>
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<td>Approved GEOL Elective</td>
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<tr>
<td>CE 3400 Mechanics of Materials</td>
<td>3</td>
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<tr>
<td>PETE 4060 Prevention of Oil and Gas Well Blowouts</td>
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<tr>
<td>PETE 3053 Petroleum Engineering Aspects of Subsurface Geology</td>
<td>3</td>
</tr>
<tr>
<td>PETE 3085 Well Performance and Production</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2000 English Composition*</td>
<td>3</td>
</tr>
<tr>
<td>Approved Technical Elective</td>
<td>3</td>
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<tr>
<td><strong>Total Semester Hours:</strong></td>
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<tr>
<th>Semester 7</th>
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<tbody>
<tr>
<td>PETE 4051 Reserve Estimation and Reservoir Management</td>
<td>3</td>
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<tr>
<td>PETE 4045 Drilling Engineering</td>
<td>3</td>
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<tr>
<td>PETE 4058 Reservoir Mechanics Laboratory</td>
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<td>PETE 4059 Drilling Fluids Laboratory</td>
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<tr>
<td>PETE 4998 Senior Project I</td>
<td>1</td>
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<tr>
<td><em>General Education Courses – Humanities</em></td>
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<tr>
<td>PETE Design Course</td>
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<td><em>General Education Courses – Social Sciences</em></td>
<td>3</td>
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<tr>
<td><em>General Education Courses – Humanities</em></td>
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