REQUEST FOR ADDITION OF NEW COURSE

PROPOSED COURSE DESCRIPTION

Rubric & No. | EE 2741
---|---
Title | Digital Logic I

Short Title (≤ 19 characters) | DIGITAL LOGIC I

Semester Hours of Credit | 3

If combination course type, # hrs. of credit for:
- Lecture: 2
- Lab/Sem/Rec: 1

Repeat Credit Max. (if repeatable):
- NA_credit hours
- Graduate Credit? Yes _No

Credit will not be given for this course and:
- Lecture
- Lab
- Seminar
- Recitation
- Lec/Rec
- Lec/Sem
- Lec/Lab
- Res/Ind
- Clin/Pract
- Intern

Maximum enrollment per section: (use integer, e.g. 25 not 20-30) 18

Grading System:
- Letter Grade X
- Pass/Fail
- Final Exam:** Yes X No

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

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

EE 2741 Digital Logic I (3) Prereq: Math 1550. 2 hrs lecture; 2 hrs lab. Boolean algebra; logic gates; analysis and synthesis of combinational logic circuits; introduction to sequential circuits.

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

If this course is approved, will additional staff be needed? Yes _No X

Will additional space, equipment, special library materials or other major expense be involved? Yes _No X

Academic Affairs Approval:

ATTACHMENTS (ATTACH THE FOLLOWING TO YOUR PROPOSAL)

JUSTIFICATION: Justification must explain why this course is needed and how it fits into the curricula. Will the course duplicate other courses?
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: 9/28/2017

Digitally signed by Jerry L. Trahan
Date: 2017.10.02 08:24:30 -06'00'

Department Chair Signature (date)

Graduate Dean Signature (date)

College Contact E-mail

College Dean Signature (date)

Chair, FS C&E Committee (date)

Academic Affairs Approval (date)
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
- EE 3752 – will be EE 2742, form C attached
- EE 3755 – will be EE 2742, form C attached
- EE 4242 – will be EE 2742, form C attached
- EE 4740 – will be EE 2741, form C attached
- CSC 3102 – new prerequisite TBD by the CSC department. They are currently working on a form C

The transition plan: REVISION

Spring 2018:

Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:

Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:

Offer EE 2742 for the first time

Substitutions:

Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

Students with credit in EE 2740 and 2731, will receive credit for EE 2741 and EE 2742.
EE 2741, EE 2742: Digital Logic I and II

Course Sequence Justification

Digital logic is a fundamental course in electrical and computer engineering, offered at the freshman/sophomore level. It is currently offered as a required two-course sequence, EE 2740 (Digital Logic) and EE 2731 (Digital Logic Lab). The first course in the sequence (EE 2740) develops the concepts in the classroom and the second (EE 2731) explores the applied side in a lab setting.

The proposed redesign of this course sequence is to include a lab component in both courses in the sequence. The first course in the proposed sequence, EE 2741, covers combinational logic and the beginnings of sequential logic. The 3 credit hours at this level will help lay a strong foundation for the second, 2-credit hour, course in which students can be expected to progress more quickly; this second course will cover elements of sequential logic and components such as multiplexers, counters and registers, that are important in practice. The reduction in the lecture hours will be made up for by a slight reduction in the depth of coverage in some topics, and by removing redundancy required for some lab prep in EE 2731.

In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
Proposal for Redesigning a set of Current Catalog Courses (EE 2740, 2731 to EE 2741, 2742)

EE 2741: Digital Logic I

Faculty Contact Information
R. Vaidyanathan, 3316V Patrick F. Taylor Hall; 225-578-5238; vaidy@lsu.edu
G. DeSouza, 3330E Patrick F. Taylor Hall; 225-578-5575; gdesou1@lsu.edu

Office Hours: TBA 100 minutes per week

Catalog Data

EE 2741 Digital Logic I (3) Prereq: Math 1550. 2 hrs lecture; 2 hrs lab. Boolean algebra; logic gates; analysis and synthesis of combinational logic circuits; introduction to sequential circuits.

Prerequisite by Topic
Analytic Geometry and Calculus I

Course Objectives and Learning Outcomes
This course is designed to provide the student with a basic understanding of combinational digital logic and a beginner's understanding of sequential logic. The course is to educate the student to (1) be able to analyze and design combinational circuits, (2) be able to convert between binary number representations and understand circuits for simple arithmetic operations on binary numbers, (3) be able to understand the function of latches and flip-flops. The course is also to prepare the student for EE 2742 (Digital Logic II).

Text and References

14-Week Course Outline

Lecture:
1. Introduction to logic values, binary numbers, truth tables and logic gates (2 weeks)
2. Simple design examples (2 weeks)
3. Boolean algebra and Karnaugh maps (2 weeks)
4. Adders, Signed number representation (2 weeks)
5. Introduction to sequential logic Flip-flops (2 weeks)
6. Analysis of sequential circuits based on a single flip-flop (2 weeks)
7. Design of sequential circuits using a single D flip-flop (2 weeks)
Lab:

1. Lab protocol; design and testing basics (measurement tools, CAD tools) (2 weeks)
2. Chip testing and Boolean function identification; data sheets (1 week)
3. Verilog; timing diagram. (1 week)
4. Combinational logic design; modular design (2 weeks)
5. Adders, multipliers; ALU bitslice (2 weeks)
6. Circuit delay; prefix computation (2 weeks)
7. Verification of state diagram of flip-flops and simple sequential circuits; asynchronous inputs (2 weeks)
8. Design of two-state sequential circuits using a D flip-flop. (2 weeks)

Grading

The grades will be based on the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Lab Work</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Participation</td>
<td>5%</td>
</tr>
</tbody>
</table>

The class average, if less than 70%, will be scaled up to 70% and letter grades assigned as follows:

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 97</td>
<td>A+</td>
</tr>
<tr>
<td>≥ 93 and &lt; 97</td>
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<td>≥ 89 and &lt; 93</td>
<td>A-</td>
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<tr>
<td>≥ 85 and &lt; 89</td>
<td>B+</td>
</tr>
<tr>
<td>≥ 81 and &lt; 85</td>
<td>B</td>
</tr>
<tr>
<td>≥ 77 and &lt; 81</td>
<td>B-</td>
</tr>
<tr>
<td>≥ 73 and &lt; 77</td>
<td>C+</td>
</tr>
<tr>
<td>≥ 69 and &lt; 73</td>
<td>C</td>
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<tr>
<td>≥ 65 and &lt; 69</td>
<td>C-</td>
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<td>≥ 60 and &lt; 65</td>
<td>D+</td>
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<td>≥ 55 and &lt; 60</td>
<td>D</td>
</tr>
<tr>
<td>≥ 50 and &lt; 55</td>
<td>D-</td>
</tr>
<tr>
<td>&lt; 50</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Grade Components

Homework: Students will be required to work a set of problems (typically 2–3 per week) based on the material covered in class.
Lab Work: Students will be required to complete experiment/implementation exercise(s) each week. A report on the work will have to be submitted.

Quizzes: There will be around five short (10 minute) quizzes over the entire semester. The quizzes are to incentivize students to keep up with the material covered in the course.

Exams 1 and 2: These exams will be held at roughly the 1/3 and 2/3 points in the semester. They will include questions, primarily from the third of the course before the exam.

Final Exam: This is a comprehensive exam of the material covered in the course.

Participation: These points will be based on clicker questions posed throughout the course.

Expectations
In accordance with LSU's General Information on Courses, a student should expect to spend at least 6 hours per week on the course (in addition to class and lab time). For more information, see catalog.lsu.edu/content.php?catoid=14&navoid=1030

LSU Student Code of Conduct
The LSU Code of Student Conduct explains students rights and expected student behavior; students are expected to understand this code. This and other information have links from www.lsu.edu/students/saa/students.

Excused Absences
In general, an excused absence is one due to extenuating circumstances (such as medical reasons). More details of LSU's policy on student absence from class is available at https://sites01.lsu.edu/wp/policiesprocedures/policies-procedures/22/

With an excused absence, missed homework, quiz or participation points will be the average of earned points in the remaining homework, quizzes or participation exercises. Exams and lab assignments missed with a valid excused must me made up on a different day.

Disabilities
The University is committed to making reasonable efforts to assist individuals with disabilities in their efforts to avail themselves of services and programs offered by the University. To this end, Louisiana State University will provide reasonable accommodations for persons with documented qualifying disabilities. If you have a disability and feel you need accommodations in this course, you must present a letter to me from Disability Services in 115 Johnston Hall, indicating the existence of a disability and the suggested accommodations.

Academic Success
Academic success in this course hinges on a clear understanding of the concepts and developing good critical thinking abilities. Because new concepts build on those covered earlier, an important ingredient of success is keeping current with the material covered. Activities that help with this
include attending classes regularly, using the homework and labs to further comprehension, and resolving doubts as early as possible.

The LSU Center for Academic Success (www.lsu.edu/students/cas/) offers guidance on learning strategies, tutoring help, and workshops on subjects ranging from note taking to time management.

The LSU Olinde Career Center (www.lsu.edu/students/careercenter/) can assist you with the choice of your major and suitable professional directions, and to develop a career plan towards these.
REQUEST FOR ADDITION OF NEW COURSE

Department | Electrical and Computer Engr | College | Engineering
Date | 9/30/2017

PROPOSED COURSE DESCRIPTION

Rubric & No. | EE 2742 | Title | Digital Logic II

Short Title (≤ 19 characters) | DIGITAL LOGIC II

Semester Hours of Credit | 2

If combination course type, # hrs. of credit for
Lecture: | 1
Lab/Sem/Rec: | 1

Repeat Credit Max. (if repeatable): | NA credit hours
Graduate Credit? | Yes

Credit will not be given for this course and:

Course Type (Indicate hours in the appropriate course type.)
Lecture | Lab | Seminar | Recitation | Lec/Rec | Lec/Sem | Lec/Lab | Res/Ind | Clin/Pract | Intern

Maximum enrollment per section: (use integer, e.g. 25 not 20-30) | 18

Grading System: | Letter Grade | X | Pass/Fail | Final Exam:** | Yes | X | No

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

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

EE 2742 Digital Logic II (3) Prereq: EE 2741 1 hr lecture; 2 hrs lab. Analysis and synthesis of sequential logic circuits; standard logic elements such as multiplexers, counters and registers.

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

If this course is approved, will additional staff be needed? | Yes | No | X

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

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 | 9/28/2017 | College Faculty Approval Date | 10/23/17

Department Chair Signature | (date) | Chair, FS C&C Committee | (date)

Graduate Dean Signature | (date) | College Dean Signature | (date)

College Contact | E-mail | Academic Affairs Approval | (date)

Digitally signed by Jerey L. Trahan
Date: 2017.10.02 08:22:06 06'00'
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
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The transition plan: REVISION

Spring 2018:
Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:
Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:
Offer EE 2742 for the first time

Substitutions:
Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

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EE 2741, EE 2742: Digital Logic I and II

Course Sequence Justification

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In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
Proposal for Redesigning a set of Current Catalog Courses (EE 2740, 2731 to EE 2741, 2742)

EE 2742: Digital Logic II

Faculty Contact Information

R. Vaidyanathan, 3316V Patrick F. Taylor Hall; 225-578-5238; vaidy@lsu.edu
G. DeSouza, 3330E Patrick F. Taylor Hall; 225-578-5575; gdesou1@lsu.edu

Office Hours: TBA 100 minutes per week

Catalog Data

EE 2742 Digital Logic II (2) Prereq: EE 2741. 1 hr lecture; 2 hrs lab. Analysis and synthesis of sequential logic circuits; standard logic elements such as multiplexers, counters and registers.

Prerequisite by Topic

Combinational logic, basic ideas of sequential logic.

Course Objectives and Learning Outcomes

This course is designed to build on a basic understanding of combinational digital logic and provide the student with an understanding of the design and analysis of sequential circuits. The course is to educate the student to (1) understand the function and use of standard components such as multiplexers, registers and components (2) be able to analyze and design logic circuits (3) be able to design simple circuits using a Hardware Description Language. The course will also to prepare the student for more advanced courses in the electrical and computer engineering programs.

Text and References


14-Week Course Outline

Lecture:

1. Recap of combinational logic, Boolean Algebra; Karnaugh maps with don't care entries; product of sums expressions (2 weeks)
2. Multiplexers and Shannon's theorem, NAND/NOR as universal gates (2 weeks)
3. Review of Flip-flops; Characteristic Equations (1 week)
4. Analysis of Sequential circuits (1 week)
5. Registers and Shift Registers (2 weeks)
6. Counters (2 weeks)
7. Design of Sequential circuits using D flip-flops; ASM charts (4 weeks)
Lab:

1. Behavioral and structural implementations; vectored signals; testbench; resource usage. (1 week)
2. Combinational circuit implementation with don’t care inputs. (1 week)
3. MUX-based implementation; NAND/NOR implementation; fan-in and fan-out (2 weeks)
4. Priority encoder; Simple bus-based system (2 weeks)
5. Verify state diagram; identify an unknown state; initialize machine state; (1 week)
6. Universal shift registers; counters (2 weeks)
7. Digital alarm (binary pattern recognition circuit) (2 weeks)
8. Project (3 weeks)

Grading

The grades will be based on the following components:

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<td>C</td>
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</tr>
</tbody>
</table>

Description of Grade Components

Homework: Students will be required to work a set of problems (typically 2-3 per week) based on the material covered in class.
Lab Work: Students will be required to complete experiment/implementation exercise(s) each week. A report on the work will have to be submitted.

Exams 1 and 2: These exams will be held at roughly the 1/3 and 2/3 points in the semester. They will include questions, primarily from the third of the course before the exam.

Lab Project: The students will work on a project that will be assigned at the beginning of the semester. Details of the projects will become more apparent as the course progresses and students learn new concepts. The last three weeks of the lab session will be dedicated to implementing the project. A demonstration of the project and a report are required at the end of the semester.

Final Exam: This is a comprehensive exam of the material covered in the course.

Participation: These points will be based on clicker questions posed throughout the course.

Expectations
Since this course builds on EE 2741, it is expected that students will be well-versed in combinational logic design and the basics of sequential logic. In accordance with LSU's General Information on Courses, a student should expect to spend at least 4 hours per week on the course (in addition to class time). For more information, see catalog.lsu.edu/content.php?catoid=14&navoid=1030

LSU Student Code of Conduct
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The LSU Olinde Career Center (www.lsu.edu/students/careercenter/) can assist you with the choice of your major and suitable professional directions, and to develop a career plan towards these.
EE 2741, EE 2742: Digital Logic I and II

Prerequisite Adjustment for Courses using Digital Logic

The following "downstream" EE courses currently have EE 2740 as a prerequisite. There are no courses with EE 2731 as prerequisite. For the component of the prerequisite satisfied by EE 2740, the table below gives the proposed prerequisite (EE 2741 or EE 2742) for the downstream courses.

<table>
<thead>
<tr>
<th>EE</th>
<th>Proposed Prerequisite</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2731</td>
<td></td>
<td>Course replaced</td>
</tr>
<tr>
<td>3710</td>
<td>2741</td>
<td>EE 2741 will provide a base level understanding of digital logic</td>
</tr>
<tr>
<td>3752</td>
<td>2742</td>
<td>EE 3752 needs ideas, such as registers, covered in EE 2742</td>
</tr>
<tr>
<td>3755</td>
<td>2742</td>
<td>EE 3755 needs ideas, such as FSMs (for the control unit), that are covered in EE 2742</td>
</tr>
<tr>
<td>4242</td>
<td>2742</td>
<td>EE 4242 requires a full understanding of digital logic</td>
</tr>
<tr>
<td>4740</td>
<td>2741</td>
<td>EE 2741 will cover Boolean algebra, needed for EE 4740</td>
</tr>
</tbody>
</table>
Request for CHANGING an Existing Course

| Department | Electrical and Computer Engr | Course Number | EE 3710 | College | Engineering | Date | 9/30/2017 |

**PRESENT COURSE DESCRIPTION**

<table>
<thead>
<tr>
<th>Title</th>
<th>Communications in Computing</th>
</tr>
</thead>
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<tr>
<td>Semester Hours of Credit</td>
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<tr>
<td>If combination course type, # hrs. of credit for</td>
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<tr>
<td>Repeat Credit Max. (If repeatable):</td>
<td>NA</td>
</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes ______ No X</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td></td>
</tr>
<tr>
<td>Contact Hours Per Week:</td>
<td>(Indicate hours in appropriate course type.)</td>
</tr>
<tr>
<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>3</td>
<td></td>
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<tr>
<td>Total Weekly Contact Hours:</td>
<td>3</td>
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<tr>
<td>Grading System:</td>
<td>Letter Grade X Pass/Fail</td>
</tr>
<tr>
<td>Course Description:</td>
<td>(Include course number, title, etc., exactly as it appears in the General Catalog)</td>
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</tbody>
</table>

**PROPOSED COURSE DESCRIPTION**

<table>
<thead>
<tr>
<th>Title</th>
<th>Communications in Computing</th>
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</thead>
<tbody>
<tr>
<td>Short Title</td>
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<tr>
<td>Semester Hours of Credit</td>
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<tr>
<td>If combination course type, # hrs. of credit for</td>
<td>Lecture: NA Lab/Sem/Rec:</td>
</tr>
<tr>
<td>Repeat Credit Max. (If repeatable):</td>
<td>NA</td>
</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes ______ No X</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td></td>
</tr>
<tr>
<td>Contact Hours Per Week:</td>
<td>(Indicate hours in appropriate course type.)</td>
</tr>
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<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Weekly Contact Hours:</td>
<td>3</td>
</tr>
<tr>
<td>Grading System:</td>
<td>Letter Grade X Pass/Fail</td>
</tr>
<tr>
<td>Course Description:</td>
<td>(Include course number, title, etc., exactly as it appears in the General Catalog)</td>
</tr>
</tbody>
</table>

**EE 3710 Communications in Computing (3) Prereq.: EE 2740. Coreq.: 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.**

**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 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 10-23-17

Department Chair Signature (date)

Graduate Dean Signature (date)

College Contact E-mail

College Faculty Approval Date 10-23-17

College Dean Signature (date)

Academic Affairs Approval (date)
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
- EE 3752 – will be EE 2742, form C attached
- EE 3755 – will be EE 2742, form C attached
- EE 4242 – will be EE 2742, form C attached
- EE 4740 – will be EE 2741, form C attached
- CSC 3102 – new prerequisite TBD by the CSC department. They are currently working on a form C

The transition plan: REVISION

Spring 2018:

Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:

Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:

Offer EE 2742 for the first time

Substitutions:

Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

Students with credit in EE 2740 and 2731, will receive credit for EE 2741 and EE 2742.
EE 2741, EE 2742: Digital Logic I and II

Course Sequence Justification

Digital logic is a fundamental course in electrical and computer engineering, offered at the freshman/sophomore level. It is currently offered as a required two-course sequence, EE 2740 (Digital Logic) and EE 2731 (Digital Logic Lab). The first course in the sequence (EE 2740) develops the concepts in the classroom and the second (EE 2731) explores the applied side in a lab setting.

The proposed redesign of this course sequence is to include a lab component in both courses in the sequence. The first course in the proposed sequence, EE 2741, covers combinational logic and the beginnings of sequential logic. The 3 credit hours at this level will help lay a strong foundation for the second, 2-credit hour, course in which students can be expected to progress more quickly; this second course will cover elements of sequential logic and components such as multiplexers, counters and registers, that are important in practice. The reduction in the lecture hours will be made up for by a slight reduction in the depth of coverage in some topics, and by removing redundancy required for some lab prep in EE 2731.

In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
Request for **CHANGING** an Existing Course

<table>
<thead>
<tr>
<th>Department</th>
<th>Electrical and Computer Engr</th>
<th>Course</th>
<th>EE 3752</th>
<th>College</th>
<th>Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Rubric &amp; Number</td>
<td>EE 3752</td>
<td>Date</td>
<td>9/30/2017</td>
<td></td>
<td></td>
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</tbody>
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**PRESENT COURSE DESCRIPTION**

<table>
<thead>
<tr>
<th>Title</th>
<th>Microprocessor Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
<tr>
<td>If combination course type, # hrs. of credit for</td>
<td>Lecture: 2</td>
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<tr>
<td>Repeat Credit Max. (if repeatable):</td>
<td>No</td>
</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td></td>
</tr>
<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>2</td>
</tr>
<tr>
<td>Lab</td>
<td>2</td>
</tr>
<tr>
<td>Seminar</td>
<td>2</td>
</tr>
<tr>
<td>Recitation</td>
<td>2</td>
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<tr>
<td>Intern</td>
<td>2</td>
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<tr>
<td>Res/Ind</td>
<td>2</td>
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<tr>
<td>Clin/Pract</td>
<td>2</td>
</tr>
<tr>
<td>Total Weekly Contact Hours:</td>
<td>4</td>
</tr>
<tr>
<td>Grading System:</td>
<td>Letter Grade X</td>
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</table>

**PROPOSED COURSE DESCRIPTION**

<table>
<thead>
<tr>
<th>Title</th>
<th>Microprocessor Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Title</td>
<td>MICROCPRESSOR SYST</td>
</tr>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
<tr>
<td>If combination course type, # hrs. of credit for</td>
<td>Lecture: 2</td>
</tr>
<tr>
<td>Repeat Credit Max. (if repeatable):</td>
<td>No</td>
</tr>
<tr>
<td>Graduate Credit?</td>
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</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td></td>
</tr>
<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type.)</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>2</td>
</tr>
<tr>
<td>Lab</td>
<td>2</td>
</tr>
<tr>
<td>Seminar</td>
<td>2</td>
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<td>Recitation</td>
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<tr>
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<td>2</td>
</tr>
<tr>
<td>Res/Ind</td>
<td>2</td>
</tr>
<tr>
<td>Clin/Pract</td>
<td>2</td>
</tr>
<tr>
<td>Total Weekly Contact Hours:</td>
<td>4</td>
</tr>
<tr>
<td>Grading System:</td>
<td>Letter Grade X</td>
</tr>
</tbody>
</table>

EE 3752 Microprocessor Systems (3) Prereqs: 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.

**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 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>9/28/2017</th>
<th>College Faculty Approval Date</th>
<th>10/23/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair Signature</td>
<td>(date)</td>
<td>College Dean Signature</td>
<td>(date)</td>
</tr>
<tr>
<td>Graduate Dean Signature</td>
<td>(date)</td>
<td>CSE, FS, C&amp;C Committee</td>
<td>(date)</td>
</tr>
<tr>
<td>College Contact E-mail</td>
<td></td>
<td>Academic Affairs Approval</td>
<td>(date)</td>
</tr>
</tbody>
</table>
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
- EE 3752 – will be EE 2742, form C attached
- EE 3755 – will be EE 2742, form C attached
- EE 4242 – will be EE 2742, form C attached
- EE 4740 – will be EE 2741, form C attached
- CSC 3102 – new prerequisite TBD by the CSC department. They are currently working on a form C

The transition plan: REVISION

Spring 2018:

Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:

Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:

Offer EE 2742 for the first time

Substitutions:

Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

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EE 2741, EE 2742: Digital Logic I and II

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Request for CHANGING an Existing Course

Department: Electrical and Computer Engr  
College: Engineering

Course Rubric 

Course Number: EE 3755  
Date: 9/30/2017

PRESENT COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>Computer Organization</th>
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<tbody>
<tr>
<td>Semester Hours of Credit</td>
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<tr>
<td>If combination course type, # hrs. of credit for</td>
<td>Lecture: NA</td>
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<tr>
<td></td>
<td>Lab/Sem/Rec:</td>
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<tr>
<td>Repeat Credit Max. (if repeatable):</td>
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</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes X No</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td>NA</td>
</tr>
<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type)</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Weekly Contact Hours</td>
<td>3</td>
</tr>
<tr>
<td>Grading System: Letter Grade: X Pass/Fail</td>
<td></td>
</tr>
<tr>
<td>Course Description: (Include course number, title, etc. exactly as it appears in the General Catalog)</td>
<td></td>
</tr>
</tbody>
</table>

EE 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

PROPOSED COURSE DESCRIPTION

<table>
<thead>
<tr>
<th>Title</th>
<th>Computer Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Title</td>
<td>COM P U T E R C O R G</td>
</tr>
<tr>
<td>Semester Hours of Credit</td>
<td>3</td>
</tr>
<tr>
<td>If combination course type, # hrs. of credit for</td>
<td>Lecture: ____</td>
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<tr>
<td></td>
<td>Lab/Sem/Rec: ____</td>
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<tr>
<td>Repeat Credit Max. (if repeatable):</td>
<td>NA</td>
</tr>
<tr>
<td>Graduate Credit?</td>
<td>Yes X No</td>
</tr>
<tr>
<td>Credit will not be given for this course and:</td>
<td>NA</td>
</tr>
<tr>
<td>Contact Hours Per Week: (Indicate hours in appropriate course type)</td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Lab</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Weekly Contact Hours</td>
<td>3</td>
</tr>
<tr>
<td>Grading System: Letter Grade: X Pass/Fail</td>
<td></td>
</tr>
<tr>
<td>Course Description: (Include course number, title, etc. exactly as it appears in the General Catalog)</td>
<td></td>
</tr>
</tbody>
</table>

EE 3755 Computer Organization (3) Prereq.: EE 2742 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

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 X N/A X
Is this course included in any curricula, concentrations, or minors? Yes X No X If yes, please list on a separate sheet.
Is this course a prerequisite or corequisite for other courses? Yes X No X If yes, list courses; use separate sheet.
Is this course on the General Education list? Yes X 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: 9/28/2017

Department Chair Signature: Digitally signed by Jerry L. Trahan Date: 2017.09.29 15:39:51.060Z

Graduate Dean Signature: (date)

College Faculty Approval Date: 10/23/17

College Dean Signature: (date)

Chief, FS C&C Committee: (date)

Academic Affairs Approval: (date)
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
- EE 3752 – will be EE 2742, form C attached
- EE 3755 – will be EE 2742, form C attached
- EE 4242 – will be EE 2742, form C attached
- EE 4740 – will be EE 2741, form C attached
- CSC 3102 – new prerequisite TBD by the CSC department. They are currently working on a form C

The transition plan: REVISION

Spring 2018:

Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:

Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740. EE 2731 they must take EE 2742 a semester to follow

Spring 2019:

Offer EE 2742 for the first time

Substitutions:

Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

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Course Sequence Justification

Digital logic is a fundamental course in electrical and computer engineering, offered at the freshman/sophomore level. It is currently offered as a required two-course sequence, EE 2740 (Digital Logic) and EE 2731 (Digital Logic Lab). The first course in the sequence (EE 2740) develops the concepts in the classroom and the second (EE 2731) explores the applied side in a lab setting.

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In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
REQUEST FOR ADDING, CHANGING, SUSPENDING
OR DROPPING AN
UNDERGRADUATE CURRICULUM

Department  Division of Electrical and Computer Engineering
College  Engineering
Name of Curriculum/Major  Electrical Engineering
Type of Degree  BS

Date  10/17/2017

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: 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>
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<tbody>
<tr>
<td>Total semester hours in current curriculum:</td>
<td>127</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date  9/30/2017

Digitally signed by Jerry L. Trahan
Date: 2017.10.12 14:19:29 -06'00'

Department Chair's Signature  
(Date)  11/9/17

Chair, FS C & C Committee  
(Date)

College Faculty Approval Date  10/23/17

College Dean's Signature  
(Date)

Academic Affairs Approval  
(Date)

College/Division/Department Contact: John Scalzo

(Please print name.)

Contact E-mail: jscalz1@lsu.edu
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

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The transition plan: REVISION

Spring 2018:
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Fall 2018:
Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:
Offer EE 2742 for the first time

Substitutions:
Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

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In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
Dear Vaidy,
I will use EE 2741 so that your students will have the most flexibility in what semester to enroll in CSC 3102.
I am preparing the paperwork now.
Regards,
Coretta

On Thu, 28 Sep 2017 20:43:05 +0000, Ramachandran Vaidyanathan wrote
>
> Coretta,
>
> I understand, EE 2740 (Digital Logic) is currently the prerequisite to CSC 3102. EE 2740 was the first of a 2-course sequence of which EE 2740 was the lecture part and the second course (EE 2731) was the lab. We are now in the process of replacing the EE 2740, 2731 sequence by a new EE 2741, 2741 sequence in which the lecture and lab components are included in both courses.
> To help you decide which of the two new courses should be the prerequisite to CSC 3102, here is a brief description.
>   * Collectively, the new sequence covers almost the same material as the old sequence
>   * EE 2741, the first course in the new sequence covers the essential elements of combinational logic and the basics of sequential logic.
>
> If you need further clarification or have questions about the coverage of specific topics, please let me know.
> Thanks
> Vaidy
>
>
> -----Original Message-----
> From: John D Scalzo
> Sent: Thursday, September 28, 2017 2:45 PM
> To: Coretta Douglas <douglas@csc.lsu.edu>; Ramachandran Vaidyanathan <vaidy@lsu.edu>
> Cc: Jerry L Trahan <jtrahan@lsu.edu>
> Subject: RE: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU Catalog Course Description CSC 2259
>
> Vaidy - please correspond with Coretta about CSC 3102. The current prerequisite of CSC 3102 is EE 2740. So depending on what they need exactly, they must change this to EE 2741 or 2742, since we will be deleting EE 2740.
>
> I am not sure we can move the proposal forward without a form C from CSC.
>
Thank you!
Good NEWS!
Coretta

On Thu, 28 Sep 2017 19:09:01 +0000, John D Scalzo wrote

> Coretta,
>
> The division of electrical and computer engineering acknowledges and
> approves of the change to the catalog course description of CSC 2259.
>
> John Scalzo, MSEE
> Senior Instructor, Undergraduate Adviser Division of Electrical and
> Computer Engineering Louisiana State University
> 3335 Patrick F. Taylor Hall, Baton Rouge, LA 70803 office
> 225-578-5478 www.ece.lsu.edu/fac/Scalzo.html

Yes... That is what we are proposing - formally.
Send name of student and I will forward to CoE Student Services.

Coretta

On Wed, 27 Sep 2017 20:03:41 +0000, John D Scalzo wrote

If a person is one class away from the minor in CSC, only needing to
take the credit exam in CSC 2259, would you accept THIS SEMESTER
credit for 4740 to sub for it?

I have a student in my office doing senior checkout, and that is the
only class he needs. He recently dropped the minor because he
decided not to take the exam.
> > >
> > > - John
> > >
> > > -----Original Message-----
> > > From: Coretta Douglas [mailto:douglas@csc.lsu.edu]
> > > Sent: Wednesday, September 27, 2017 1:50 PM
> > > To: John D Scalzo <jscalz1@lsu.edu>
> > > Subject: RE: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU
> > > Catalog Course Description CSC 2259
> > >}
> > > :)
> > >
> > > On Wed, 27 Sep 2017 16:53:59 +0000, John D Scalzo wrote
> > > We are having a faculty meeting tomorrow to discuss this. I asked
> > > Vaidy to send you his course syllabus. - John
> > >
> > > -----Original Message-----
> > > From: Coretta Douglas [mailto:douglas@csc.lsu.edu]
> > > Sent: Wednesday, September 27, 2017 11:25 AM
> > > To: John D Scalzo <jscalz1@lsu.edu>
> > > Subject: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU
> > > Catalog Course Description CSC 2259
> > >
> > > Hi John,
> > > ...
> > > see request below.
> > > From: "Coretta Douglas" <douglas@www.csc.lsu.edu>
> > > To: "Scalzo, John D" <jscalz1@lsu.edu>, Charles Delzell
> > > <mmdelz@lsu.edu>
> > > Cc: "Busch, Konstantin" <busch@csc.lsu.edu>
> > > Subject: CSE: RESPONSE REQUESTED Change to LSU Catalog Course
> > > Description CSC 2259
> > >
> > > Dear Chip and John,
> > > As you know, we are working on curriculum forms to change the LSU
> > > General Catalog description for CSC 2259 to prohibit students from
> > > receiving credit in CSC 2259 and MATH 2020 or EE 4740. See the
> > > attached Form C for CSC 2259.
> > > (1) Please reply to this email with your department’s response to
> > > the change.
> > > (Approved, Not Approved, or request for more information).
> > >
> > > (2) Please provide a detailed syllabus for your relevant course:
> > > MATH 2020 (Delzell) and EE 4740 (Scalzo). As a reminder, do
include the 14-week lecture and a statement of the student's expected participation in the course on your syllabus. See attached CSC 2259 syllabus.

Heads-up:

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For our 4 concentrations, we intend to add to the catalog descriptions (and the programming of the degree audits), that CS majors may receive credit for EE 4740 as a substitution for CSC 2259. Subsequent to previous communication with the Mathematics department, we will NOT include MATH 2020 in the list of approved substitutions for CSC 2259.

See the last statement in the Justification to CSC 2259 (Form C):

"The Mathematics Department has declined to accept CS majors in MATH 2020 classes as an alternative due to restricted faculty resources. We will continue to work individually with students who have earned credit in MATH 2020 [such as MATH majors] and are pursuing either a CS dual major or the CS minor for accommodations on an exception basis."

Much appreciated,

Coretta

Coretta Douglas, Ph.D. Computer Science
Undergraduate/Instructional Coordinator and Instructor Patrick F.

Taylor 3270-A ** Division of Computer Science and Engineering **
School of Electrical Engineering and Computer Science

--------- End of Forwarded Message ---------

Coretta Douglas, Ph.D. Computer Science
Undergraduate/Instructional Coordinator and Instructor Patrick F.

Taylor 3270-A ** Division of Computer Science and Engineering **
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Indicate the curriculum semester for all General Education courses.

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<tr>
<th>General Education Requirement</th>
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<th>Credit Hours</th>
<th>Curriculum Semester</th>
</tr>
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<tbody>
<tr>
<td>English Composition (6 hrs.)</td>
<td>ENGL 1001 or 1004</td>
<td>3</td>
<td>(X) 1st (5th) (1st) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<td>ENGL 2000</td>
<td>3</td>
<td>(X) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
<td>Analytical Reasoning (6 hrs.)</td>
<td>MATH 1550</td>
<td>3</td>
<td>(X) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
<td>(At least 3 hours credit must be from a MATH course.)</td>
<td>MATH 1552</td>
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<tr>
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<tr>
<td>Humanities (9 hrs.)</td>
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<td>3</td>
<td>(X) 1st (5th) (2nd) (6th) (3rd) (7th) (4th) (8th)</td>
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<tr>
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<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>Life Science Elective</td>
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<tr>
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<tr>
<td>(At least three hours at the 2000-level.)</td>
<td>General Education social science course (2000-level)</td>
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### EE - Eight Semester Recommended Path

#### Present

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<th>Semester 3</th>
<th>Semester 4</th>
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#### Proposed

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<th>Semester 4</th>
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<td><strong>Semester 5</strong>&lt;br&gt;Critical: “C” or better in EE 2130</td>
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<td>EE4820 (3)</td>
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</table>
REQUEST FOR ADDING, CHANGING, SUSPENDING OR DROPPING AN UNDERGRADUATE CURRICULUM

Department: Division of Electrical and Computer Engineering
College: Engineering
Name of Curriculum/Major: Computer Engineering
Type of Degree: BS
Date: 10/12/2017

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

( ) 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 strikethrough 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:</td>
<td>127</td>
</tr>
</tbody>
</table>

APPROVALS:

Department Faculty Approval Date: 9/30/2017
Digitally signed by Jerry L. Tahan
Date: 2017.10.12 14:20:36 -06'00'

Department Chair's Signature: [Signature] (Date)

Chair, FS C & C Committee: [Signature] (Date)

College Faculty Approval Date: 10/23/17

College Dean's Signature: [Signature] (Date)

Academic Affairs Approval: [Signature] (Date)

College/Division/Department Contact: John Scalzo
(Please print name.)

Contact E-mail: jscaiz1@lsu.edu
New Courses
EE 2741, EE 2742: Digital Logic I and II

EE 2731 is not currently a prerequisite for any courses.

EE 2740 is a prerequisite for many courses, here are the changes:

- EE 3710 – will be EE 2741, form C attached
- EE 3752 – will be EE 2742, form C attached
- EE 3755 – will be EE 2742, form C attached
- EE 4242 – will be EE 2742, form C attached
- EE 4740 – will be EE 2741, form C attached
- CSC 3102 – new prerequisite TBD by the CSC department. They are currently working on a form C

The transition plan: REVISION

Spring 2018:
Offer EE 2740 for the last time, if students cannot pass EE 2740, they must take EE 2741 a semester to follow

Fall 2018:
Offer EE 2741 for the first time, and EE 2731 for the last time; if students cannot pass EE 2740, EE 2731 they must take EE 2742 a semester to follow

Spring 2019:
Offer EE 2742 for the first time

Substitutions:
Since material in EE 2740 is spread over two courses (EE 2741, EE 2742), students with credit in EE 2740 will receive credit for EE 2741 and matriculate into EE 2742.

Students with credit in EE 2740 and 2731, will receive credit for EE 2741 and EE 2742.
Course Sequence Justification

Digital logic is a fundamental course in electrical and computer engineering, offered at the freshman/sophomore level. It is currently offered as a required two-course sequence, EE 2740 (Digital Logic) and EE 2731 (Digital Logic Lab). The first course in the sequence (EE 2740) develops the concepts in the classroom and the second (EE 2731) explores the applied side in a lab setting.

The proposed redesign of this course sequence is to include a lab component in both courses in the sequence. The first course in the proposed sequence, EE 2741, covers combinational logic and the beginnings of sequential logic. The 3 credit hours at this level will help lay a strong foundation for the second, 2-credit hour, course in which students can be expected to progress more quickly; this second course will cover elements of sequential logic and components such as multiplexers, counters and registers, that are important in practice. The reduction in the lecture hours will be made up for by a slight reduction in the depth of coverage in some topics, and by removing redundancy required for some lab prep in EE 2731.

In summary, the proposed courses realign the coverage of the material to expose students to the classroom and lab setting, concurrently in the same course. We believe this change will help students understand the material better; the lab setting will also help motivate student interest and retention.
Dear Vaidy,

I will use EE 2741 so that your students will have the most flexibility in what semester to enroll in CSc 3102. I am preparing the paperwork now.

Regards,
Coretta

On Thu, 28 Sep 2017 20:43:05 +0000, Ramachandran Vaidyanathan wrote

> I understand, EE 2740 (Digital Logic) is currently the prerequisite to CSC 3102. EE 2740 was the first of a 2-course sequence of which EE 2740 was the lecture part and the second course (EE 2731) was the lab. We are now in the process of replacing the EE 2740, 2731 sequence by a new EE 2741, 2741 sequence in which the lecture and lab components are included in both courses.
> To help you decide which of the two new courses should be the prerequisite to CSC 3102, here is a brief description.

- Collectively, the new sequence covers almost the same material as the old sequence
- EE 2741, the first course in the new sequence covers the essential elements of combinational logic and the basics of sequential logic.

> If you need further clarification or have questions about the coverage of specific topics, please let me know.
> Thanks
> Vaidy
>
> -----Original Message-----
> From: John D Scalzo
> Sent: Thursday, September 28, 2017 2:45 PM
> To: Coretta Douglas <douglas@csc.lsu.edu>; Ramachandran Vaidyanathan <vaidy@lsu.edu>
> Cc: Jerry L Trahan <jtrahan@lsu.edu>
> Subject: RE: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU Catalog Course Description CSC 2259
>
> Vaidy - please correspond with Coretta about CSC 3102. The current prerequisite of CSC 3102 is EE 2740. So depending on what they need exactly, they must change this to EE 2741 or 2742, since we will be deleting EE 2740.
>
> I am not sure we can move the proposal forward without a form C from CSC.
>  
> -----Original Message-----
> From: Coretta Douglas [mailto:douglas@csc.lsu.edu]
> Sent: Thursday, September 28, 2017 2:40 PM
> To: John D Scalzo <jscalz1@lsu.edu>
> Subject: RE: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU Catalog Course Description CSC 2259
> 
> Thank you!
> Good NEWS!
> Coretta
> 
> On Thu, 28 Sep 2017 19:09:01 +0000, John D Scalzo wrote
>  > Coretta,
>  >>
>  >> The division of electrical and computer engineering acknowledges and
>  >> approves of the change to the catalog course description of CSC 2259.
>  >>
>  >> John Scalzo, MSEE
>  >> Senior Instructor, Undergraduate Adviser Division of Electrical and
>  >> Computer Engineering Louisiana State University
>  >> 3335 Patrick F. Taylor Hall, Baton Rouge, LA 70803 office
>  >> 225-578-5478 www.ece.lsu.edu/fac/Scalzo.html
>  >>
>  >> -----Original Message-----
>  > From: Coretta Douglas [mailto:douglas@csc.lsu.edu]
>  > Sent: Thursday, September 28, 2017 11:39 AM
>  > To: John D Scalzo <jscalz1@lsu.edu>
>  > Subject: RE: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU
>  > Catalog Course Description CSC 2259
>  >>
>  >> Yes... That is what we are proposing - formally.
>  >> Send name of student and I will forward to CoE Student Services.
>  >>
>  >> Coretta
>  >>
>  >> On Wed, 27 Sep 2017 20:03:41 +0000, John D Scalzo wrote
>  >>> If a person is one class away from the minor in CSC, only needing to
>  >>> take the credit exam in CSC 2259, would you accept THIS SEMESTER
>  >>> credit for 4740 to sub for it ?
>  >>>
>  >>> I have a student in my office doing senior checkout, and that is the
>  >>> only class he needs. He recently dropped the minor because he
>  >>> decided not to take the exam.
On Wed, 27 Sep 2017 16:53:59 +0000, John D Scalzo wrote
We are having a faculty meeting tomorrow to discuss this. I asked
Vaidy to send you his course syllabus. - John

Hi John,
... see request below.

From: Coretta Douglas [mailto:douglas@csc.lsu.edu]
Sent: Wednesday, September 27, 2017 11:25 AM
To: John D Scalzo <jscalz1@lsu.edu>
Subject: REMINDER Fw: CSE: RESPONSE REQUESTED Change to LSU
Catalog Course Description CSC 2259

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(Approved, Not Approved, or request for more information).

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Much appreciated,

Coretta

Coretta Douglas, Ph.D. Computer Science
Undergraduate/Instructional Coordinator and Instructor Patrick F.
Taylor 3270-A ** Division of Computer Science and Engineering **
School of Electrical Engineering and Computer Science

------- End of Forwarded Message -------

Coretta Douglas, Ph.D. Computer Science
Undergraduate/Instructional Coordinator and Instructor Patrick F.
Taylor 3270-A ** Division of Computer Science and Engineering **
School of Electrical Engineering and Computer Science

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## EEC - Eight Semester Recommended Path

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<td><strong>Total Semester Hours (15)</strong></td>
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TOTAL HOURS = 127

COMPUTER ENGINEERING

2017-2018 @ REV 2

HOURS: 16 17 15 15 15 15 = 127

FLOWCHART LEGEND

C A grade in the "C" range or better is required in this course.
S Offered in Spring Semester Only
F Offered in Fall Semester Only

May be a prerequisite for another course therefore any grade in the C range or better is required.
A Senior standing and one of 3160, 3220, 3410, 3530, 3610, or 3755

@ This flowchart is only an advising tool, the LSU catalog has the official degree requirements.

Credit required
Credit or registration required

# Students can take PHIL 2020 if PHIL 2018 is not available

General Education – See 2017-2018 General Catalog

ECE Division Office   Patrick F Taylor 3325

9/1/17
TOTAL HOURS = 127  
** DRAFT**

**COMPUTER ENGINEERING**

FALL 1  SPRING 2  FALL 3  SPRING 4  FALL 5  SPRING 6  FALL 7  SPRING 8

1. (3) CHEM 1201 Basic Chem.
2. (3) EE 2741 Dig Logic I
3. (3) CSC 1253 Intro CSC
4. (2) EE 2810 ECE Tools
5. (3) EE 3752 Micro Lab
6. (3) EE 4740 Dis. Math
7. (3) CSC 4103 Op Sys
8. (3) EE 4720 Comp Arch

1. (5) MATH 1550 Calculus I
2. (3) CSC 1254 Intro CSC II
3. (2) EE 2810 ECE Tools
4. (3) EE 3752 Micro Lab
5. (3) CSC 3102 Adv Struct
6. (3) EE 4755 HCL & DIG
7. (3) EE 4820 SR DSN 2

1. (2) EE 1610 Intro to ECE
2. (4) MATH 2070 Engr Math
3. (3) EE 2120 Circuits II
4. (3) EE 2130 Circuits II
5. (3) EE 3150 Probability
6. (3) EE 3710 Comm in Comp
7. (3) EE 4810 SR DSN 1

1. (3) PHYS 2110 Gen Phys I
2. (3) PHYS 2113 Gen Phys III
3. (3) PHYS 2113 Gen Phys III
4. (3) EE 2230 Electronics I
5. (3) HUMAN Phil 2018 #
6. (3) 2000+ Level Social Science Elective
7. (3) HUMAN Gen Ed

1. (1) PHYS 2108 Phys Lab
2. (2) EE 2231 Elect Lab
3. (3) SOCIAL SCI Gen Ed
4. (3) ENGL 2000 Comp II

1. (3) ART Gen Ed
2. (3) ENGL 1001 Comp I
3. (3) Life Science Gen Ed

1. This flowchart is only an advising tool, the LSU catalog has the official degree requirements.
2. Credit required
3. Credit or registration required
4. A prerequisite to any electrical engineering course is met only by obtaining a grade in the C range or better in each course cited as a prerequisite.

**FLOWCHART LEGEND**

- C: A grade in the "C" range or better is required in this course.
- S: Offered in Spring Semester Only
- F: Offered in Fall Semester Only
- #: Students can take PHIL 2020 if PHIL 2018 is not available

**Division of ECE Office**
3325 Patrick F. Taylor

**EEC Breadth (3), Select one course from:**
- 3160 (F) Digital Signal Processing
- 3220 (S) Electronics 2
- 3320 Electromagnetic Fields
- 3410 Electric Power
- 3530 (F) Controls Engineering
- 3610 Signals and Communications

**Senior standing and one of 3160, 3220, 3410, 3530, 3610, or 3755**

8/29/17
REQUEST FOR ADDING, ChangING, SUSPENDING OR DROPPING UNDERGRADUATE MINOR

Department: Biological and Agricultural Engineering  College: Engineering  Date: 10/9/2017

Name of Minor: Biological Engineering Minor

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).

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 small caps 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 biological engineering may obtain a minor in biological engineering by completing each of these courses with a grade of “C” or better: BE 3340, BE 4303, BE 4341, BE 4380; BIOL 1201, BIOL 1208, BIOL 1202, BIOL 1209, and BIOL 2051.</td>
<td>Any student not majoring in biological engineering may obtain a minor in biological engineering by completing each of these courses with a grade of “C” or better: BIOL 1201, BIOL 1208, BIOL 1202, BIOL 1209, and BIOL 2051, BE 3340, BE 4303, BE 4341, BE 4380 and two courses chosen from a list of approved Design Electives available in the Department of Biological and Agricultural Engineering’s main office.</td>
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APPROVALS:
Department Faculty Approval Date 10/9/17
Department Chair’s Signature
(Date) John B. Hoppe

College Faculty Approval Date 10/23/17
College Dean’s Signature
(Date)

Chair, FS C & C Committee (Date) 11/9/17
Academic Affairs Approval (Date) 11/16/17

Contact Email

(Please print name.)
Due to loss of faculty and broader student interest in the biological engineering minor courses BE 4341 and BE 4380 will be removed. All department approved Design Elective courses will be able to be taken for these six hours of course credit for the biological engineering minor. The Biological and Agricultural Engineering department thinks this change will provide more flexibility for courses available and topics covered for students interested in minoring in biological engineering.
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