South Dakota Board of Regents

EXISTING PROGRAM: SUBSTANTIVE PROGRAM MODIFICATION
This form is used to request substantive changes in already existing programs (majors, minors, specializations).

1. INSTITUTION: South Dakota State University

2. CURRENT PROGRAM NAME: Computer Science (BS)

3. THIS PROPOSAL DEALS WITH A CHANGE IN:

   Distribution of Credits
   
   X total credits required within the discipline
   
   X total credits of supportive course work

4. LEVEL: Bachelor’s Degree

5. CATEGORY: Major

6. EFFECTIVE DATE OF CHANGE: Fall 2014

8. PRIMARY ASPECTS OF THE MODIFICATION:

Existing Curriculum | Proposed Curriculum (Highlight Changes)
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<td><strong>System General Education Requirements</strong></td>
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<td><strong>Major Requirements</strong></td>
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CSC 300 | Data Structures | 3  
|-----|----------------|-----
CSC 303 | Ethical and Security Issues in Computing | 2  
|-----|----------------|-----
CSC 314 | Assembly Language | 3  
|-----|----------------|-----
CSC 317 | Computer Organization and Architecture | 3  
|-----|----------------|-----
CSC 346 | Object Oriented Programming | 3  
|-----|----------------|-----
CSC 354 | Introduction to Programming | 3  
|-----|----------------|-----
CSC 445 | Introduction to Theory of Computation | 3  
|-----|----------------|-----
CSC 446 | Compiler Construction | 3  
|-----|----------------|-----
CSC 456 | Operating Systems | 3  
|-----|----------------|-----
CSC 461 | Programming Languages | 3  
|-----|----------------|-----
CSC 470 | Software Engineering | 3  
|-----|----------------|-----
CSC 484 | Database Management Systems | 3  
|-----|----------------|-----
CSC 485 | Software Engineering II | 3  

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<th>Supporting Coursework</th>
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MATH 125 | Calculus II | 4
MATH 215 | Matrix Algebra | 2
MATH 253 | Logic, Sets and Proof | 3
MATH 316 | Discrete Mathematics | 3
MATH 374 | Scientific Computation I | 3
EE 245-245L | Digital Systems and Lab | 4
STAT 281 | Introduction to Statistics | 3

Natural Science (Different course than SGR #6) : 4
- PHYS 111-111L
- Or PHYS 211-211L
- Or CHEM 112-112L
- Or BIOL 151-151L

Total number of hours required for major, minor, or specialization : 45
Total number of hours required for degree : 120

Supporting Coursework : 24
MATH 125 | Calculus II | 4
MATH 215 | Matrix Algebra | 2
MATH 253 | Logic, Sets and Proof | 3
MATH 316 | Discrete Mathematics | 3
MATH 374 | Scientific Computation I | 3
EE 245-245L | Digital Systems and Lab | 4
STAT 281 | Introduction to Statistics | 3

Natural Science (Different course than SGR #6) : 4
- PHYS 111-111L
- Or PHYS 211-211L
- Or CHEM 112-112L
- Or BIOL 151-151L

Technical Electives : 12
Technical Electives must be 300 level or higher.
A minimum of 9 of the 12 technical credits must be in approved CSC or SE courses.
3 of the 12 credits may come from a departmental approved support area.

Total number of hours required for major, minor, or specialization : 46
Total number of hours required for degree : 120

9. EXPLANATION OF THE CHANGE:
The requested changes are a result of feedback from the fall 2012 accreditation review, on-going program assessment review, and cumulative feedback from the industry advisory board.

Required course removed:
- MATH 215 (2 credits). This course material will be added to the existing MATH 253 and 316 courses. The faculty, in conjunction with the math department discovered much overlap between the
three course sequence previously used and other CSC courses. The Math department is working on a revised curriculum for MATH 253 and 316 that will be available in the fall 2014.

- CSC 303 (2 credits). This course material will be dispersed into the remaining CSC courses.
- CSC 470 Software Engineering I and CSC 484 Database Management Systems (6 credits). This material will be covered in the junior year in the SE 305 and SE 306 course sequence. This allows the creation of a true senior design sequence that is common throughout the college of engineering.

Existing courses added:
- SE 305 (3 credits) existing course
- SE 306 (3 credits) minor course modification of existing course
- SE 464 (2 credits) existing course
- SE 465 (2 credits) existing course

Laurie Stenberg Nichols 3/25/14
Institutional Authorization (President or Designee)  Date Submitted