Department/Discipline and Course Number: Computer Science - CPSC 420
Course Title: Simulation Techniques

Type of change (check all applicable):
Course Number* _____ Title_X_____ Credits_____ Description_X__ Prerequisites X__Deletion_____  
*This course number must be approved by the Office of the Registrar before the proposal is submitted.

Course should be renamed CPSC 420 Modeling and Simulation.
Course should be cross-listed as ANLY 420.

Effective Date: FALL Semester, Year ___Fall 2013_____________________________

<table>
<thead>
<tr>
<th>Current Catalog Entry</th>
<th>Proposed Catalog Entry</th>
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<tbody>
<tr>
<td>Simulation Techniques</td>
<td>Modeling and Simulation</td>
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<tr>
<td>Prerequisite: Computer Science 321 or 330. An investigation of computer simulation techniques in the modeling of various systems. Includes an examination of various types of simulations including discrete event, Monte Carlo, and continuous time.</td>
<td>Prerequisite: Computer Science 220. A robust introduction to techniques of mathematical modeling and computational simulation applied to practical problems. Topics include system dynamics approaches, discrete-event simulation, and agent-based models. Students complete small projects on topics as diverse as population growth, epidemic transmission, queuing theory, and forest-fire outbreaks.</td>
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JUSTIFICATION (including impact on majors, minors, concentrations, and general education courses within the University curriculum; attach additional pages if required)
This course has been revised for a broader audience as part of the proposed Data Science minor. Because the content (essentially taught last spring as a special topics course: CPSC 370V) has been revised, the pre-requisite can be lowered to CPSC 220 without negatively impacting the course.

There will be no impact on majors, concentrations, or general education courses. The only impact would be on a minor (the proposed Data Science minor). This updated course serves as a requirement for the minor.

Since this course is intended to form part of the requirements for the proposed new Data Sciences minor, and since it will be a foundational class for a future fifth-year masters program in Data Analytics (from COB), we desire that it be cross-listed as ANLY 420.

**TRANSITION PLAN**

*describe how will students who are in Catalogs where the course is required for a major be accommodated; attach additional pages if required*

This course is not required for a major, but can be used as an elective for the CPSC major. Students who took 370V should not receive credit for this course, too. Because only 30 students took 370 V, we can track them easily and ensure they do not take this course, too.

**Approvals**

Department Chair ______Jennifer Polack-Wahl_________________ Date: _____10/31/12_______

College Curriculum Chair ______Bradley Hansen_______________ Date: _____11/9/12_______

Expedited course changes are posted for a 10-class day comment period. If no comments are raised during that time, the proposal becomes final. All expedited proposals approved in this way will be noted on the UCC web site.

If comments are raised, the proposal may be reviewed by the UCC and then approved or it may be returned to the CCC for additional deliberation (as required).