Submitted by: Jennifer A. Polack  
Date Prepared: 10/28/2014

Department/Discipline(s) and Course Number(s): CPSC 240
Course Title: Data Structures and Algorithms

Type of change (check all applicable):

Number: 240 Title: Credits: Description: Prerequisites: X Deletion: Cross list:

*This course number must be approved by the Office of the Registrar before the proposal is submitted.

**To cross list courses between departments/colleges, there should be two cover sheets submitted with the proposal – one by the chair of each department with signatures from the relevant College Curriculum Committee Chair.

Effective Date: FALL Semester, Year 2015

Current Catalog Entry | Proposed Catalog Entry
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330 – Object-Oriented Analysis and Design (4) Prerequisite: CPSC 230. Theory and practice of the object-oriented software development paradigm. Focus is on major design principles such as abstraction, encapsulation, inheritance, polymorphism, aggregation, and visibility. Modeling notations for capturing and critiquing designs. Introduction to the concept of design patterns, and coverage of a catalog of common patterns. Students work in team projects to develop collaborative software solutions in an object-oriented language. | 240 – Object-Oriented Analysis and Design (4) Prerequisite: (1) Grade of C or better in CPSC 220 and (2) CPSC 225. Theory and practice of the object-oriented software development paradigm. Focus is on major design principles such as abstraction, encapsulation, inheritance, polymorphism, aggregation, and visibility. Modeling notations for capturing and critiquing designs. Introduction to the concept of design patterns, and coverage of a catalog of common patterns. Students work in team projects to develop collaborative software solutions in an object-oriented language.

JUSTIFICATION (including impact on majors, minors, concentrations, and general education courses within the University curriculum; attach additional pages if required)

Students currently take CPSC 230 Data Structures prior to taking CPSC 330 Object-oriented Analysis and Design (OOA&D). CPSC 230 currently serves as a prereq to CPSC 330 to provide students with additional programming experience prior to taking the OOA&D course. We have determined that students would better be served by taking the OOA&D course before taking the Data Structures course because the OOA&D course is a more natural sequel to CPSC 220 Programming and Problem Solving; it builds on the 220 content in a more direct way by letting students combine those techniques to form more complex programs. Additionally, Data Structures is a more technically rigorous and complex course, and students would have a greater chance of success with an additional semester of programming. To reflect the new order of the courses in our curriculum, we are proposing to renumber these courses as CPSC 240 Object-oriented Analysis and Design and CPSC 340 Data Structures and Algorithms.

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)
People who have completed the current CPSC 230 Data Structures course prior to the fall of 2015 and who have not taken CPSC 330 Object Oriented Analysis and Design will be instructed to take CPSC 240 to replace CPSC 330 as an equivalent course. An additional section of CPSC 240 will be offered in the initial catalog change year to accommodate both students who have completed CPSC 220 (the new prerequisite) and students who have completed CPSC 230 (the former prerequisite to the course). CPSC 240 will be considered equivalent to CPSC 330 in the degree requirements for students who have declared the major prior to Fall 2015.

Expediting 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).