Expedited Course Change Cover Sheet (July 2014)

Submitted by: Randall Helmstutler  Date Prepared: 11/11/2014

Department/Discipline(s) and Course Number(s): MATH 441A

Course Title: Topology

Type of change (check all applicable):
- Number* _____
- 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

<table>
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<tr>
<th>Prerequisite: MATH 300 or 325.</th>
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<tr>
<td>Includes topics from point-set topology such as continuity, connectedness, compactness, and product and quotient constructions.</td>
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Proposed Catalog Entry

| Prerequisite: MATH 300 and at least one other 300- or 400-level mathematics course. |
| Includes topics from point-set topology such as continuity, connectedness, compactness, and product and quotient constructions. |

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

A natural progression in the study of a mathematics major is to go from 200-level through 300-level through 400-level mathematics courses, noting that the level of abstraction increases throughout these studies. With the current prerequisites for these courses, students may go straight from MATH 300 to, say, MATH 431 as an example. As a result, they do not have the mathematical maturity that is necessary to handle the abstract concepts and proofs in MATH 431. MATH 431, 441A, and 471 form the core of modern theoretical mathematics, where students must confront highly-abstract concepts and construct rigorous proofs, and so the issue described in MATH 431 also arises in 441A and 471. The proposed change would alleviate these problems. It would not force the mathematics majors to take any additional courses since they have to take some other 300- or 400-level mathematics courses anyway as part of the major. The students would simply be asked to take the required courses in an order that most effectively supports their success in our program.

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 change does not affect any existing majors or minors since all such programs require at least one additional course at the 300- or 400-level anyway.
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).