THE UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE

FACULTY SENATE

Senate Document Number 3112S

Date of Senate Approval 02/09/12

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Statement of Faculty Senate Action:

APC Document 21: Changes to Concentration in Applied Mathematics

Effective Date: Fall 2012

1. Delete: On page 217, under Concentration in Applied Mathematics, the entire section:

This program of study is designed for students planning a career in industry where training in problem solving and interdisciplinary work is essential or for students planning to pursue a graduate degree in an applied mathematics field. Students in this program are strongly encouraged to minor in a science or social science.

I. Required courses in the major—38–39 hours, including: MATH 191, 192, 280, 291, 341, 365, 381, 394, 480, 491; STAT 225 or 425; and an additional 6 hours in Mathematics or Statistics at the 300-400 level. These latter hours must include one course from MATH 352, 366, 395, 492, or STAT 426.
II. Required courses outside the major—18–20 hours: CSCI 181; and 15–17 hours, to include 9 hours at the 300-400 level, in an area of specialization in a discipline in which mathematical applications are important. This area of specialization must be approved by the department chair.
III. Other departmental requirements—Satisfactory performance on a comprehensive Mathematics exam and the satisfactory presentation of one seminar in MATH 480. Successful completion of MATH 480 demonstrates oral competency. Successful completion of CSCI 181 demonstrates computer competency.

Add: On page 217, in place of deleted entry:

The Applied Mathematics Concentration is structured around the premise that Mathematics is a useful tool in many academic areas. Students in this program are required to take upper-level courses in a second discipline of their choosing, and are encouraged to explore the connections between mathematics and this second discipline. By developing expertise in two areas, students will increase their options for future studies and employments after they graduate.

I. Required courses in the major – 38-39 hours, including: MATH 191, 192, 280, 291, 365, 381, 394, 480, 491; STAT 225 or 425; one course from MATH 366, 395, 441, 452 or STAT 426; and an additional 6 hours in Mathematics or Statistics at the 300-400 level.

II. Required courses outside the major – 18 hours: including: CSCI 181 or 182 and at least 15 additional hours from a discipline in which mathematical applications are important. These courses must be approved by the department chair. 9 of the 15 hours must be at the 300-400 level.
III. Other departmental requirements – Satisfactory performance on a comprehensive Mathematics exam and the satisfactory presentation of one seminar in MATH 480. Successful completion of MATH 480 demonstrates oral competency. Successful completion of CSCI 181 or 182 demonstrates computer competency.

Impact Statement:
There are no major resource implications. The new wording will clarify the purpose and philosophy behind applied mathematics. The new requirements will allow more options and scheduling flexibility for students, thus easing timely graduation

Rationale:
Changes in departmental resources and new university wide focus on student outcomes necessitates the reviewing of programs. The applied mathematics concentration has several inconsistencies when compared to the other concentrations. These changes address these inconsistencies. The new program also ensures that it offers students flexibility without adding additional resource burden to the department.