

THE UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE
FACULTY SENATE

Senate Document Number 4719S
Date of Senate Approval 04/04/19

Statement of Faculty Senate Action:

APC Document 40 (ENGR): **Revise the requirements for the Mechatronics Concentration**

Effective Date: Fall 2019

- 1. Delete:** On page 136, the entry under **Requirements for Engineering with a Mechatronics Concentration**
- I. Required courses in the major—71 hours: E 101; ECE 109, 200, 209, 211, 212, 220, 306, 310, 456; JEM 123, 180, 360, 484, 485; MAE 201, 206, 208, 214, 308, 310, 315, 316, 435; and one advisor-approved elective from ECE 455, JEM 420 or MSE 201.
 - II. Required courses outside the major—31 hours: CHEM 111, 132; ECON 102; MATH 191, 192, 291; PHYS 221, 222; STAT 225.
 - III. Other departmental requirements—Senior demonstration of competency in the major is satisfied by the successful completion of JEM 484 and 485, the Senior Design Projects.

Add: On page 136, in place of deleted entry:

- I. Required courses in the major—71 hours: E 101; ECE 109, 200, 209, 211, 212, 220, 306, 310; JEM 123, 180, 360, 420, 484, 485; MAE 201, 206, 208, 214, 308, 310, 315, 316, 435; and one advisor-approved elective from JEM 455 or MSE 201.
- II. Required courses outside the major—31 hours: CHEM 111, 132; ECON 102; MATH 191, 192, 291; PHYS 221, 222; STAT 225.
- III. Other departmental requirements—Senior demonstration of competency in the major is satisfied by the successful completion of JEM 484 and 485, the Senior Design Projects.

Impact Statement: The changes proposed will increase by two the number of classes taught live on the UNC Asheville campus. The total number of credits in the degree remains the same at 128.

Rationale: For pedagogical reasons, there is a need to increase the number of face-to-face taught classes. Currently, there are 6 E & JEM classes taught face-to-face and 17 MAE & ECE classes that are offered via distance education technology. JEM 420 and JEM 455 will replace the courses ECE 455 and ECE 456 which were offered as asynchronous (based on pre-recorded lectures) distance education classes. The main purpose is to improve the quality of education for our students (better learning through face-to-face course delivery). In addition, JEM 420 and JEM 455 are both tailored to mechatronics specifically.