

THE UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE
FACULTY SENATE

Senate Document Number 1414F
Date of Senate Approval 12/04/14

Statement of Faculty Senate Action:

APC Document 11 (ENGR): **Add new course: MAE 308, Fluid Mechanics;
Add MAE 308 as an option to ECE 456 for the
Engineering (Mechatronics) major**

Effective Date: Fall 2015

1. Add: On page 139, new course, **MAE 308, Fluid Mechanics:**

308 Fluid Mechanics (3)

Development of the basic equations of fluid mechanics in general and specialized form. Application to a variety of topics including fluid statics; inviscid, incompressible fluid flow; design of Fluid dynamic system. Prerequisites: MATH 291, C- or better in MAE 208. Corequisites: ECE 220 and MAE 301. Fall.

Impact: JEM (Joint Engineering with a Mechatronics concentration) majors will have the choice of taking MAE 308 instead of ECE 456. The total number of hours required for the major will remain the same. This courses will not be taught locally, and there will be little impact on the resources and staffing of the Engineering department at UNC Asheville as a result of this change.

Rationale: Students will benefit from the increased flexibility in scheduling and the ability to chose between a focus in mechanical engineering (i.e., MAE 308) or electrical engineering (i.e, ECE 456); both courses forward the study of Mechatronics.

2. Delete: On page 135, under **Requirements for Engineering with a Mechatronics Concentration:**

- I. Required courses in the major—67 hours: E 101; ECE 109, 200, 209, 211, 212, 220, 301, 310, 455, 456; EGM 180, 360, 484, 485; MAE 206, 208, 301, 310, 314, 315, 316, 435; MSE 201.

Add: On page 135, in place of deleted entry:

- I. Required courses in the major—67 hours: E 101; ECE 109, 200, 209, 211, 212, 220, 301, 310, 455, ECE 456 or MAE 308; EGM 180, 360, 484, 485; MAE 206, 208, 301, 310, 314, 315, 316, 435; MSE 201.

Impact: The total number of hours required for the JEM (Joint Engineering with a Mechatronics concentration) degree will not change. Majors will now have the opportunity to take MAE 308 instead of ECE 456. These courses are not taught locally, and there will be little impact on the resources and staffing of the Engineering department at UNC Asheville as a result of this change.

Rationale: These are editorial changes to reflect the changes in the courses and requirements for the JEM major.