



UNC CHARLOTTE

SHORT FORM COURSE AND CURRICULUM PROPOSAL

To: Wesley Williams, Undergraduate Course and Curriculum Committee Chair

From: Kevin Lawton

Date: 2/13/2013

Re: Changes for the Energy engineering concentration – descriptions of courses

SUMMARY:

The Department of Mechanical Engineering and Engineering Science requests changes to the descriptions of three courses in order to better align them with the designations for the senior design courses for Motorsports engineering students and students without a concentration.

FOR CONSULTATION WITH OTHER DEPARTMENTS:

1. Does the proposed change affect other departments (including additions and/or changes to degree requirements or prerequisites offered in other departments)?

_____ Yes No

2. If Yes, please list the other departments affected by the proposed change:

3. Have you consulted with each department listed in item 2 regarding the proposed change?

_____ Yes _____ No

Result(s) of Consultation(s) (please attach documentation):

For a new course or for major modification of an existing course, include Consultation on Library Holdings.

RESOURCES:

1. For a new course or revisions to an existing course, check all the statements that apply:
 This course will be cross listed with another course.
 There are prerequisites for this course.
 There are co-requisites for this course.
 This course is repeatable for credit.
 This course will affect the number of credits hours for its program.
 This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.
 This proposal will alter and agreement with a North Carolina community college.

For all items checked above, applicable statements and content must be reflected in the proposed catalog copy.

2. Indicate the additional resources required, if any, to implement and maintain the proposed change.

CREDIT HOUR:

This change does not affect credit hours.

PROPOSED CATALOG COPY:

MEGR 2499. Energy Engineering Clinic I Introduction to Energy Engineering. (1)
Prerequisites: Admission to BSME energy concentration, Sophomore standing, and a GPA of 3.0 or above. An examination of various aspects of the energy engineering.

MEGR 3455. Energy Engineering Clinic II Energy Senior Design I. (2) Prerequisites: Senior standing; MEGR 2499, MEGR 3112, MEGR 3156, and MEGR 3171L, all with grades of C or above. Pre- or corequisites: MEGR 3152 and MEGR 3251. First of a two-semester sequence leading to a major integrative experience in applying the principles of design and project management to the design of a major mechanical engineering system with energy/power emphases. Teamwork and communication skills are emphasized.

MEGR 3456. Energy Engineering Clinic III Energy Senior Design II. (2) (O) Prerequisites: MEGR 3455. Second of a two-semester sequence leading to a major integrative experience in applying the principles of design and project management to the design of a major mechanical engineering system with energy/power emphases. Teamwork and communication skills are emphasized.

**Suggested Curriculum: B.S.M.E. Degree with a Concentration in
Energy Engineering**

First Year

Fall Semester

Course	Credits
CHEM 1251 Chemistry I	3
CHEM 1251L Chemistry Lab	1
ENGL 1101 English I	3
ENGR 1201 Intro to Engineering I	2
LBST 110x Arts & Society	3
MATH 1241 Calculus I	3

Spring Semester

Course	Credits
ENGL 1102 English II	3
ENGR 1202 Intro to Engineering II	2
MATH 1242 Calculus II	3
PHYS 2101 Physics I	3
PHYS 2101L Physics I Lab	1
Science Elective	3

Second Year

Fall Semester

Course	Credits
ECON 2101 Principles of Economics – Macro	3
HIST 2101 Western Cultural & Historical Analysis	3
MATH 2241 Calculus III	3
MEGR 2111 Engineering Mechanics I	3
PHYS 2102 Physics II	3
PHYS 2102L Physics II Lab	1

Spring Semester

Course	Credits
ENGR 2101 Basic Electrical Engineering I	3
MATH 2171 Differential Equations	3
MEGR 2151 Solid Mechanics	3
MEGR 2156 Design Projects Lab I	2
MEGR 2180 Manufacturing Systems	3
MEGR 2240 Computational Methods	3
MEGR 2100 Energy Engineering Introduction to Energy Engineering	3

Third Year

Fall Semester

Course	Credits
MEGR 3111 Thermodynamics I	3
MEGR 3121 Dynamic Systems I	3
MEGR 3161 Engineering Materials	3
MEGR 3171 Measurements and Instrumentation	2
MEGR 3171L Instrumentation Lab	2
Math Elective	3

Spring Semester

Course	Credits
MEGR 3112 Thermodynamics II	3
MEGR 3114 Fluid Mechanics	3
MEGR 3115 Heat Transfer	3
MEGR 3122 Dynamic Systems II	3
MEGR 3152 Mechanics and Materials Lab	2
MEGR 3156 Design Project Lab II (<i>Energy Engineering Area</i>)	2

Fourth Year	
Fall Semester	
Course	Credits
ENGR 3295 Professional Development	1
ENGR 3212 Global and Intercultural Connections	3
MEGR 3221 Machine Analysis and Design	3
MEGR 3221 Thermal/Fluids Lab	2
MEGR 3455 Energy Engineering Clinic-HEnergy Senior Design I*	2
Energy Technical Electives (2)	6
Spring Semester	
Course	Credits
ENGR 3212 Global and Intercultural Connections	3
MEGR 3216 Thermal / Fluids Design	3
MEGR 3456 Energy Engineering Clinic-HEnergy Senior Design II*	2
Energy Technical Electives (2)	6

Total Credit Hours = 127

STUDENT LEARNING OUTCOMES: If applicable, please indicate what SLOs are supported by this course or whether this curricular change requires a change in SLOs or assessment for the degree program.

This change does not impact the student learning outcomes of the program.

TEXTBOOK COSTS: It is the policy of the Board of Governors to reduce textbook costs for students whenever possible. Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?

This change does not impact choices of textbooks.

IMPORTANT NOTE: A Microsoft Word version of the final course and curriculum proposal should be sent to facultygovernance@uncc.edu upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.