



# UNC CHARLOTTE

## SHORT FORM COURSE AND CURRICULUM PROPOSAL

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To: Wesley Williams, Undergraduate Course and Curriculum Committee Chair

From: Kevin Lawton

Date: 2/8/2013

Re: Changes for the Motorsports engineering concentration – entry requirements and names of courses

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### **SUMMARY:**

The Department of Mechanical Engineering and Engineering Science requests changes to the requirements for students to enter the Motorsports engineering concentration. These changes will also allow students to take MEGR 2299 in the third semester (which is a semester earlier). The Department also requests changes in names to three Motorsports courses. Changing the names from 'Motorsports Clinic II' and 'Motorsports Clinic III' to 'Motorsports Senior Design I' and 'Motorsports Senior Design II' will make the naming of these courses be more consistent with 'Senior Design I' and 'Senior Design II' (MEGR 3255 and 3256).

### **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  X 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:**

Students must apply for admission and may enter the program during the sophomore or junior years only. To be admitted to the program students must have completed PHYS 2101, PHYS 2101L, MATH 1242, ENGR 1202, ENGL 1102 (or ENGL 1103) all with a grade of C or above and have a minimum GPA of 2.50.

Previous catalog copy for reference:

~~Students must apply for admission and may enter the program during the sophomore or junior years only. To be admitted to the program students must have completed Physics I (PHYS 2101 & 2101L), Calculus I, II, and III (MATH 1241, 1242, and 2241), and Engineering Mechanics I (MEGR 2141), all with a grade of C or above and have a minimum GPA of 2.5.~~

~~MEGR 2299. Motorsports Engineering Clinic I.~~ **Introduction to Motorsports Engineering.**

(1) Prerequisite: admission to Motorsports concentration; sophomore standing. An examination of various aspects of automotive and motorsports engineering presented by faculty and industry

representatives. Participation as a Motorsports Trainee (MT) is required. MT's are assigned to automotive projects on campus and/or with industrial partners.

**MEGR 3355. Motorsports Engineering Clinic II-Senior Design I. (2)** Prerequisite: admission to Motorsports concentration, Senior standing in mechanical engineering, MEGR 2299 and MEGR 3156, and MEGR 3171L, all with grades of C or above. Pre- or co-requisites: 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 an automotive engineering system. Teamwork and communication skills are emphasized. An examination of various aspects of automotive and motorsports engineering presented by faculty and industry representatives.

**MEGR 3356. Motorsports Engineering Clinic III-Senior Design II. (2) (O)** Prerequisite: admission to Motorsports concentration and MEGR 3355. A continuation of MEGR 3355 including project execution, project reporting and leading to an oral presentation and a final written report. An examination of various aspects of automotive and motorsports engineering presented by faculty and industry representatives.

**ACADEMIC PLAN OF STUDY:** If the proposed change will impact an existing Academic Plan of Study, provide updated Academic Plan of Study in template format.

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

**First Year**

**Fall Semester**

Course	Credits
CHEM 1251 Chemistry I	3
CHEM 1251L Chemistry I Lab	1
ENGL 1101 English I	3
ENGR 120 Introduction to Engineering I	2
LBST 110x Arts and Society	3
MATH 124 Calculus I	3

**Spring Semester**

Course	Credits
ENGL 1102 English II	3
ENGR 1202 Introduction to Engineering II	2
MATH 124 Calculus II	3
PHYS 2101 Physics I	3
PHYS 2101L Physics I Lab	1
Science Elective	3

**Second Year****Fall Semester**

Course	Credits
PHYS 2102 Physics II	3
PHYS 2102 Physics II(Lab)	1
MEGR 2141 Engineering Mechanics I	3
MATH 2211 Calculus II	3
ECON 2101 Principles of Economics – Macro	3
HIST 2101 Western Cultural and Historical Analysis	3
MEGR 2299 Introduction to Motorsports Engineering	1

**Spring Semester**

Course	Credits
ECGR 2161 Basic Electrical Engineering	3
MATH 2171 Differential Equations	3
MEGR 2144 Solid Mechanics	3
MEGR 2156 Design Project Lab I	1
MEGR 2180 Manufacturing Systems	3
MEGR 2210 Computational Methods	3
MEGR 2299 Motorsports Engineering Clinic I	4

**Third Year****Fall Semester**

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

**Spring Semester**

Course	Credits
MEGR 3112 Thermodynamics II	3
MEGR 3114 Fluid Mechanics	3
MEGR 3116 Heat Transfer	3
MEGR 3122 Dynamic Systems II	3
MEGR 3122 Mechanics and Materials Lab	1
MEGR 3156 Design Project Lab II	2

**Fourth Year****Fall Semester**

Course	Credits
ENGR 3295 Professional Development	1
HIST 2102 Colonial and Imperialist Connections	3
MEGR 3221 Machine Analysis and Design	3
MEGR 3251 Thermal/Fluids Lab	3
MEGR 3355 Motorsports Engineering Clinic II Senior Design I	2
Motorsports Technical Elective (2)	6

**Spring Semester**

Course	Credits
HIST 2211 Ethical Issues	3
MEGR 3216 Thermal/Fluids Design	3
MEGR 3356 Motorsports Senior Design II	2
MEGR 3356 Motorsports Engineering Clinic III	2
Math Elective	3
Motorsports Communicative	3

**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](mailto:facultygovernance@uncc.edu) upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.