2014-2015 SHORT SIGNATURE SHEET

UNC CHARLOTTE

Date: October 16, 2014

Subject: Mechanical Engineering Technology Minor Changes

Originating Department: Engineering Technology and Construction Management

TYPE OF PROPOSAL: UNDERGRADUATE X GRADUATE UNDERGRADUATE & GRADUATE
(Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE FORWARDED	COMMENTS: APPROVED, APPROVED WITH REVISIONS, ETC.	SIGNATURES
	10/29/14		PERSON ORIGINATING PROPOSAL Nan Byars
10/30/14	10/30/14	*Approved*	DEPARTMENT CHAIR Anthony Brizendine
		Approved	COLLEGE CURRICULUM COMMITTEE CHAIR Mehdi Miri
11/24/14	11/24/14	*Approved*	COLLEGE DEAN Robert Johnson
		Approved	GENERAL EDUCATION NOT APPLICABLE.
		Approved	HONORS COLLEGE NOT APPLICABLE.
		Approved	UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR (for undergraduate courses only) MANJREKAR MADHAV (SIGNED AS CEPO CHAIR)
		Approved	GRADUATE COUNCIL CHAIR NOT APPLICABLE.
			FACULTY GOVERNANCE ASSISTANT (received and processed in Academic Affairs)

Revised 05/06/14
OAA/mjw

UNC CHARLOTTE

SHORT FORM
COURSE AND CURRICULUM PROPOSAL

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*To: Mehdi Miri

From: Nan A. Byars

Date: October 16, 2014

Re: Mechanical Engineering Technology Minor Changes

SUMMARY:

The Department of Engineering Technology and Construction Management proposes the following minor changes:

For ETME 2100, ETME 1112 is changed to a prerequisite instead of a co-requisite.

For ETME 3133L, ETGR 1100L is removed as a prerequisite.

For ETME 3143, the prerequisite requirement of C or better in ETME 3133 is removed.

For ETME 3143, ETME 3100 is removed as a co-requisite.

For ETME 3113, PHYS 1101 is removed as a prerequisite.

For ETME 3150, ETME 3123 is changed to a prerequisite instead of a co-requisite.

For ETME 3213, ETME 3100 is removed as a prerequisite.

*Proposals for undergraduate courses should be sent to the Undergraduate Course and Curriculum Committee Chair. Proposals related to both undergraduate and graduate courses, (e.g., courses co-listed at both levels) must be sent to both the Undergraduate Course and Curriculum Committee and the Graduate Council.

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):

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

5. For proposals involving Honors courses or programs, include written consultation with the Honors Council. N/A

RESOURCES:

1. No new resources will be required to implement the proposed minor changes in pre and co-requisites.

CREDIT HOUR (Mandatory if new and/or revised course in proposal):

NOT APPLICABLE.

PROPOSED CATALOG COPY: For existing courses copy and paste the current catalog copy and use the Microsoft Word "track changes" feature (or use red text with "~~strikethrough~~" formatting for text to be deleted, and adding blue text with "underline" formatting for text to be added). For new courses, draft comprehensive catalog copy.

ETME 2100. Sophomore Design Practicum. (2) Prerequisites: UWRT 1100, ETGR 1201, and ETME 1112 with grades of C or above. Pre or corequisites: ~~ETME 1112 and~~ ETME 2130. Corequisite: ETME 2100L. A Sophomore-level design practicum focused on a simple, defined mechanical design challenge. Projects are completed individually and introduce students to the

design process, project management, machine shop fabrication techniques, memo style report writing and final project demonstrations. Also reinforces topics learned in previous courses such as CAD modeling, documentation generation (drawings), and analytical modeling.

ETME 3113. Dynamics. (3) Prerequisites: ETGR 2101 ~~and PHYS 1101~~ with grades of C or above; and ETME 2102; Co-requisite: ETGR 2272. The dynamic behavior of particles; translation, rotation and plane motion of a rigid body, the principles of conservation of energy and momentum.

ETME 3133L. Fluid Mechanics Laboratory. (1) (W) Prerequisites: ~~ETGR 1100L~~ and UWRT 1102 with grades of C or above. Pre- or corequisite: ETME 3133. Flow through conduits and hydraulic components and in open channels. The experimental determination of viscosity, viscous forces, and resulting power losses. Flow measuring devices such as orifices, venturi tubes, anemometers and pitot tubes. Laminar and turbulent flow. Performance of rotating machines such as Pelton turbines, centrifugal fans, and hydrostatic transmissions.

ETME 3143. Thermodynamics. (3) Prerequisites: ETME 3133 ~~with grade of C or above~~; CHEM 1251; and ETGR 2272. ~~Pre- or corequisite: ETME 3100~~. Fundamentals of thermodynamics including work and heat; classical approach to first and second laws of thermodynamics; ideal gas, entropy, reversibility, irreversibility, and study of various processes and cycles.

ETME 3150. Applied CAD Modeling and Simulation. (3) Prerequisite: ETME 1112 with a grade of C or above; ~~and~~ ETME 2102~~. Pre or corequisite:~~ and ETME 3123. A continuation of ETME 1112. Introduces the use of some of the tools available for the analysis of parametrically-constructed CAD models. Topics include: the finite element method, finite element analysis (FEA), the use of FEA for stress analysis, thermal analysis, and motion studies, and the important distinctions between FEA results, theoretical results, and experimental results.

ETME 3213. Machine Design I. (3) Prerequisites: ETME 2130, ETME 3113, and ETME 3123. ~~Pre-or corequisite: ETME 3100.~~ Analysis and design of clutches, brakes, belts and roller chain. Indeterminate normal loading, superposition of stresses and deflections, compound stresses, columns, and fatigue. Theories of failure. Shaft design, deflections of shafts with non-uniform moments of inertia involving computer verification. Antifriction bearings, engineering materials, helical compression springs. Small mechanical component and system designs.

ACADEMIC PLAN OF STUDY (UNDERGRADUATE ONLY): Does the proposed change impact an existing Academic Plan of Study?

- ☐ Yes. If yes, please provide updated Academic Plan of Study in template format.
- ☒ No.

STUDENT LEARNING OUTCOMES (UNDERGRADUATE & GRADUATE): Does this course or curricular change require a change in SLOs or assessment for the degree program?

- ☐ Yes. If yes, please provide updated SLOs in template format.
- ☒ No.

TEXTBOOK COSTS:

NOT APPLICABLE.

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.