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**Bulletin / Banner Change Transmittal Form**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

Email completed proposals to [curriculum@astate.edu](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

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| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Department Chair:** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **College Dean** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Vice Chancellor for Academic Affairs** |

**1.Contact Person** (Name, Email Address, Phone Number)

Shivan Haran, [sharan@astate.edu](mailto:sharan@astate.edu), 972 2088

**2.Proposed Change**

Add a Pre-requisite, and modify the Co-requisite for

ME 3613 Control Systems for Mechanical Engineers

* Pre-requisite:
  + Current: None
  + Change to: **MATH 4403 Differential Equations**
* Co-requisite:
  + Current: ME 3513 Mechanical Vibrations
  + Change to: **None**

**3.Effective Date**

Fall 2017

**4.Justification –** *Please provide details as to why this change is necessary.*

Electrical Engineering students have expressed interest in taking this course. For them, prior knowledge of MATH 4403 Differential Equations is adequate to understand the material and complete this course. To accommodate those EEs interested in this course, the pre-requisite is being modified. This will not affect the Mechanical Engineering majors in any way.

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Follow the following guidelines for indicating necessary changes.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)  - New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font).  - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)  *You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.*  *Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

**EE 4383. Digital Electronics II** Continuation of the study of digital circuit design with emphasis on the design of larger systems and use of LSI components. Register transfer logic, computer interfacing and design, and microcomputer based system design. Prerequisite, C or better in EE 3333. Demand. Dual listed as EE 5383.

**EE 4743. Digital Communications** Continuation of communications theory with emphasis on modulation and demodulation techniques, signal space representation of digitally modulated signals, coherent/non-coherent detection methods (and receiver structures) in AWGN channel, error performance, communication over band-limited channels with ISI and AWGN. Prerequisites, C or better in EE 3393 and EE 4333. Spring, odd.

**EE 4773. Electronics II Laboratory** Advanced design-oriented experiments in electron­ics, measurement, interfacing, and other electrical engineering topics. Corequisite, EE 4373. Prerequisites, C or better in EE 3333, and EE 3401. Spring.

**EE 479V. Special Problems in Electrical Engineering** Individually directed problems in electrical engineering for juniors and seniors. A course outline and project summary listing the goals and expected outcomes must be approved by the student advisor and the program director. Prerequisites are dependent on the nature of the special problem. Demand.

**MECHANICAL ENGINEERING PROGRAM**

**Mechanical Engineering (ME)**

**ME 2502. Solid Modeling for Mechanical Engineers** An introduction to solid modeling and computer aided drafting, CAD, for mechanical engineers. Three dimensional models of mechanical components are virtually constructed using appropriate software tools. Fall, Spring.

**ME 3504. Process Monitoring and Control** Theory and application of instrumentation, mea­surement, and control of engineering systems. Prerequisites, C or better in MATH 4403, ENGR 2423 and ENGR 3443. Fall.

**ME 3513. Mechanical Vibrations** Kinematics of harmonic and nonharmonic vibrations, sys­tems of one and several degrees of freedom, free and forced vibrations, self excited vibrations. Prerequisites, C or better in MATH 4403 and ENGR 3423. Spring.

**ME 3613. Control Systems for Mechanical Engineering** ~~This course addresses the~~ Analytical tools and principles for control design for mechanical systems including time and frequency domain techniques, analysis of response, design parameters, types of control systems, PLCs, relationship between transfer function methods and state-space methods. Prerequisite, “C” or better in MATH 4403. ~~Corequisite, ME 3513~~. Spring.

**ME 3533. Engineering Thermodynamics II** Application of first and second law concepts to actual and ideal cycles and processes. Prerequisite, C or better in ENGR 3443 and CHEM 1023. Spring.

**ME 4503. Fluid and Thermal Energy Systems** Analysis and design of components, systems, and processes using the fundamentals presented in Thermodynamics, Fluid Mechanics, and Heat Transfer. Prerequisites, C or better in ME 3533 and ME 4553. Dual listed as ME 5503. Fall.