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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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| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Ilwoo (Josh) Seok | 11/15/2016 |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | Shivan Haran | 11/15/2016 |   **Department Chair:** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (If applicable)** |
| |  |  | | --- | --- | | Jason Stewart | 11/15/2016 |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Paul Mixon | 11/15/2016 |   **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)

Ilwoo Seok, [iseok@astate.edu](mailto:iseok@astate.edu), 680-8589

**2.Proposed Change**

To change course offering semester for Introduction to Finite Element Analysis, ME 4523, from Fall, Spring to Spring.

**3.Effective Date**

Spring 2017

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

The course of Introduction to Finite Element Analysis, ME 4523, is listed in Mechanical Engineering Electives and being offered in Spring semester only. This correction will help students not plan to take in Fall, but Spring semester.

**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.* |

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**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. 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.

**ME 4523. Introduction to Finite Element Analysis** Theory and application of energy concepts and structural mechanics required for the development of finite element methods are presented. Applications to beams, trusses, torsion, etc. are presented. Prerequisites, C or better in ENGR 2413. Dual listed as ME 5523. ~~Fall,~~ Spring.

**ME 4543. Machine Design** Analysis and design of mechanical system components using theoretical and empirical concepts coupled with computational modeling and numerical analysis. Prerequisites, C or better in ENGR 2413. Dual listed as ME 5543. Fall, Spring.

**ME 4553. Heat Transfer** Application of theories of heat transfer by conduction, convection, and radiation to manufacturing processes and industrial applications. Prerequisites, C or better in MATH 4403, ENGR 2423, ENGR 3443, and ENGR 3473. Dual listed as ME 5553. Spring.

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