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| For Academic Affairs and Research Use Only |
| Proposal Number |  |
| CIP Code:  |  |
| Degree Code: |  |

**Program Modification Form**

**[ ] Undergraduate Curriculum Council**

**[x] Graduate Council**

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| **Modification Type: [ ]Admissions, [ ]Curricular Sequence, or [x]Other**  |

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

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**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Brandon Kemp | 3/4/2020 |

**Department Chair**  |

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**Head of Unit (if applicable)**   |
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| Brandon Kemp | 3/4/2020 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Abhijit Bhattacharyya | 3/6/2020 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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**General Education Committee Chair (if applicable)**   |

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**Vice Chancellor for Academic Affairs** |

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

Dr. Brandon A. Kemp

bkemp@astate.edu

870.972.2088

1. **Proposed Change** (for undergraduate curricular changes please provide an 8-semester plan (appendix A), if applicable)

Add emphasis areas in civil engineering, electrical engineering, and mechanical engineering.

Modify program learning outcomes to match actual outcomes for the program.

1. **Effective Date**

Fall 2020

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

We are adding emphasis areas to provide students with an official recognition of their work in a specific area of engineering, which will allow the students to market their skills better.

We are aligning the program outcomes with the outcomes on record with the Office of Assessment. These Outcomes were changed this year to better reflect the actual outcomes of program graduates.

1. **Student demand (projected enrollment) for program option(s):**

**The MS Engr program typically has an 15-20 students enrolled. On average, we expect enrollment of 5-7 in each emphasis areas.**

1. **Will the new option/emphasis/concentration/minor be offered:**
	1. **Traditional/Face-to-face YES**
	2. **Distance/Online N0**
		1. **If yes, indicate mode of distance delivery, and the percentage of courses offered via this modality (<50%, 50-99%, or 100%).**

Enter text...

* + 1. **If online, will it be offered through Global Initiatives/Academic Partnerships (AP)?**

Enter text...

1. **Specify the amount of the additional costs required, the source of funds, and how funds will be used.**

$0. The program isn’t changing. We are simply giving acknowledgement for students who complete their MS Engr with a course emphasis in one of the three engineering areas that the faculty hold expertise.

**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. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*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.**  |

Deletions marked in red with strikeout.

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Program of Study for the Master of Science in Engineering Degree

The Master of Science in Engineering (MSEngr) program provides an educational experience focusing on the integration of research and technology development that allows graduates to be suc­cessful in deriving solutions to society’s most challenging technical problems. To achieve this goal, the program’s objectives are to discover new scientific principles, apply novel engineering solutions, and develop cutting-edge technology toward achieving efficient and sustainable use of resources; to integrate cross-disciplinary research and teaching that produces engineering professionals equipped to take on the more complex problems that face our state and country; and to establish and grow industry-university partnerships that drive toward and prepare the region for a diverse, knowledge-based economy.

Specific program outcomes are listed below. MSEngr program graduates will have:

• A good understanding of statistical concepts and an ability to apply this knowledge to achieve engineering solutions that most efficiently use information and resources;

~~• A practical knowledge of fabrication and manufacturing techniques;~~

• An ability to apply advanced mathematical concepts to model physical systems and engineering processes to drive knowledge based design;

• An advanced, cross-disciplinary understanding of engineering sciences, and an ability to relate physical concepts from multiple engineering disciplines;

• An ability to identify critical issues, formulate realistic solutions, evaluate alternatives, and carry out independent research to provide novel solutions to technical problems; and

 • A demonstrated ability to make novel, significant contributions to the scientific and engineering body of knowledge.

Add the following emphasis tables after Page 155, 2019-2020 Graduate Bulletin





