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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: [X]Admissions, [X]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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| |  |  | | --- | --- | | Brandon Kemp | 2/7/2020 |   **Department Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (if applicable)** |
| |  |  | | --- | --- | | Brandon Kemp | 2/7/2020 |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Abhijit Bhattacharyya | 2/7/2020 |   **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)

Alexandr M. Sokolov

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1. **Proposed Change** (for undergraduate curricular changes please provide an 8-semester plan (appendix A), if applicable)
2. **The program learning outcomes are changing.**
3. **The Admission requirements are changing.**
4. **The types of admission are changing.**
5. **The program requirements are changing**
6. **Classes have been added, and core cores have changed.**
7. **Effective Date**

8/15/2020

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

This bulletin changes are needed because of all the additional certificate, admission requirements, new courses, changes in the core courses, program learning outcomes, and description of the program. This will allow ASTATE to be more competitive with other Masters of Engineering Management programs across the nation.

The program learning outcomes all have to change because the current program does not measure the current outcomes. The office of Assessment and Accreditation does not have any data for the MEM program for the past several years. This program did not implement a method to measure the outcomes which were based on the courses and not the program. From the revision of these outcomes the program will now be able to effectively measure program and course level outcomes and properly record them.

**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.** |

**Program of Study for the Master of Engineering Management Degree**

The Master of Engineering Management (MEM) program, a one-year master’s degree plan consisting of 30 semester credit hours, is designed for all engineers on management career paths as well as for those charged with managing technology in engineering, manufacturing, and other high-tech organizations. The MEM degree program will also benefit engineers pursuing licensure in states where candidates for professional licensure are required to have an additional 30 semester credit hours of coursework beyond the bachelor’s degree or a master’s degree in engineering. The curriculum consists of courses offered by the A-State College of Engineering and Computer Science.

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

~~• An ability to plan, make decisions, implement actions, and measure results related to human resources and capital aspects of engineering management;~~

~~• An ability to identify critical issues, formulate realistic solutions, evaluate alternatives, and solve engineering management problems;~~

~~• A good understanding of statistical concepts and methods and an ability to apply this knowledge to engineering and management problems;~~

~~• A good understanding of quality control and improvement techniques and an ability to apply this knowledge to manufactured products and other engineering applications;~~

~~• A good understanding of deterministic modeling and ability to apply this knowledge to engineering management problems including design of experiments;~~

~~• An ability to function on multi-disciplinary management teams; and~~

~~• An ability to communicate effectively, both orally and in writing.~~

* Graduates of the Master of Engineering Management program will be able to identify critical issues, formulate realistic solutions, evaluate alternatives, and solve technical problems.
* Graduates of the Master of Engineering Management program will be able to interpret statistical or deterministic models and concepts as well as apply them to technical problems.
* Graduates of the Master of Engineering Management program will be able to communicate effectively, both orally and in writing, to express alternatives and solutions dealing with technical problems.
* Graduates of the Master of Engineering Management program will be able to function effectively as a member or leader on a technical team.

**MEM ADMISSION REQUIREMENTS**:

~~Students seeking admission into the Master of Engineering Management degree program must meet the admission requirements of Graduate Programs. In addition, applicants for the master’s pro-gram in Engineering Management will be evaluated by the College of Engineering and Computer Sci-ence based upon their undergraduate academic record, scores on the Graduate Record Examination, resume, and letters of recommendation. Students judged to be deficient in some areas of undergradu-ate preparation may be required to complete certain undergraduate preparatory courses. Minimum specific requirements for unconditional admission include: 1) 18 undergraduate hours in engineering with a grade of C or better, a grade of C or better in upper-level mathematics courses, and an overall undergraduate grade point average of 2.75 or greater (on a 4.0 scale); 2) A minimum GRE score of 143 on verbal reasoning; 3) two letters of recommendation; and 4) a resume.~~

~~Applicants not meeting all of the above criteria may be admitted on a conditional basis if they meet other Graduate Programs admission requirements. New students not having completed the GRE may be admitted on a conditional basis, but they must complete this requirement prior to finishing the first semester of coursework. New students are normally admitted for the fall semester with applications due by June 1. Applications submitted after June 1 or any other time during the year will be considered based on qualifications and space availability.~~

~~A candidate for the Master of Engineering Management must pass a comprehensive exam in addition to completing the 30 hours required for the degree.~~

UNCONDITIONAL ADMISSION STATUS

To be granted unconditional admission status for the Masters Engineering Management Program, applicants must have met the following criteria:

1. Meet the minimum requirements for unconditional admission as set by the University.
2. Earned a Baccalaureate degree from an Accreditation Board for Engineering and Technology (ABET) accredited program under the Applied and Natural Science Accreditation Commission (ANSAC), Computing Accreditation Commission (CAC), Engineering Accreditation Commission (EAC), or Engineering Technology Accreditation Commission (ETAC).
3. Has passed Calculus I equivalent with a C or better.

CONDITIONAL ADMISSION STATUS

An applicant who fails to meet the GPA requirements for unconditional admission status, who lacks the appropriate undergraduate background for a particular certificate or degree program, or whose baccalaureate degree is from an unaccredited institution, may be granted conditional admission status

ADMISSION TO A CERTIFICATE OR DEGREE PROGRAM:

In addition to meeting the minimum requirements of the University, an applicant for admission to a certificate, master’s, specialist, or doctoral degree program also must meet departmental and/or program requirements. Applicants to a degree program must hold a baccalaureate or higher degree from an accredited four-year institution with the appropriate undergraduate background in the field of the proposed.

**MEM DEGREE REQUIREMENTS**

The number of semester credit hours for the master’s degree is 30. Students are required to complete core courses (~~21~~ 15 semester credit hours) and elective courses (~~9~~ 15 semester credit hours).

CERTIFICATE OF GENERAL ENGINEERING MANAGEMENT REQUIREMENTS

The number of semester credit hours for the Certificate of General Engineering Management is 12. Students will have to take courses within the Engineering Management Department. Students cannot take EGRM 600V, Engineering Capstone and EGRM 6133, Internship in Engineering.

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| University Requirements: |  |
| See Graduate Degree Policies for additional information (p. 39) |  |
| **MEM Program Requirements:** | Sem. Hrs. |
| EGRM 6003, Engineering Statistics | 3 |
| EGRM 6013, Quality Control and Improvement | 3 |
| EGRM 6083, Project Management for Engineers | 3 |
| ***EGRM 6053, Advanced Engineering Economy*** | ***3*** |
| ***EGRM 600V, Engineering Capstone*** | ***3*** |
| ~~EGRM 6023, Engineering Management I~~ | ~~3~~ |
| ~~EGRM 6043, Operations Research~~ | ~~3~~ |
| ~~EGRM 6063, Engineering Law and Ethics~~ | ~~3~~ |
| ~~EGRM 6113, Engineering Finance and Budgeting~~ | ~~3~~ |
| Select ~~nine~~ fifteen hours from following: | ~~9~~ 15 |
| ~~EGRM 6053, Engineering Economy~~  EGRM 6023, Engineering Management I |  |
| ***EGRM 6033, Engineering Management II*** |  |
| ***EGRM 6043, Operations Research*** |  |
| ***EGRM 6063, Engineering Law and Ethics***  EGRM 6073, Special Problems in Engineering Management |  |
| ***EGRM 6093, Value Engineering*** |  |
| EGRM 6103, Entrepreneurship for Engineers |  |
| ***EGRM 6113, Finance and Budgeting for Engineering*** |  |
| EGRM 6123, Human Resource Management for Engineers  ***EGRM 6133, Internship in Engineering***  ***EGRM 6143, Industrial Material Handling***  ***EGRM 6153, Facilities Management***  ***EGRM 6163, Logistics and Supply Chain*** |  |
| CE/CS/EE/ME/ENGR course, 5000-level or above |  |
| Sub-total | 30 |
| Total Required Hours: | 30 |

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| University Requirements: |  |
| See Graduate Degree Policies for additional information (p. 39) |  |
| **Certificate Program Requirements:** | Sem. Hrs. |
| Select twelve hours from following: | 12 |
| ***EGRM 6003, Engineering Statistics*** | ***3*** |
| ***EGRM 6013, Quality Control and Improvement*** | ***3*** |
| ***EGRM 6023, Engineering Management I*** | ***3*** |
| ***EGRM 6033, Engineering Management II*** | ***3*** |
| ***EGRM 6043, Operations Research*** | ***3*** |
| ***EGRM 6053, Advanced Engineering Economy*** | ***3*** |
| ***EGRM 6063, Engineering Law and Ethics*** | ***3*** |
| ***EGRM 6073, Special Problems in Engineering Management*** | ***3*** |
| ***EGRM 6083, Project Management for Engineers*** | ***3*** |
| ***EGRM 6093, Value Engineering*** | ***3*** |
| ***EGRM 6103, Entrepreneurship for Engineers*** | ***3*** |
| ***EGRM 6113, Finance and Budgeting for Engineering*** | ***3*** |
| ***EGRM 6123, Human Resource Management for Engineers*** | ***3*** |
| ***EGRM 6143, Industrial Material Handling*** | ***3*** |
| ***EGRM 6153, Facilities Management*** | ***3*** |
| ***EGRM 6163, Logistics and Supply Chain*** | ***3*** |
| Sub-total | 12 |
| Total Required Hours: | 12 |

**Appendix A, 8-Semester Plan**

(**Referenced in #2** - **Undergraduate Proposals Only)**

*Instructions: Please identify new courses in italics*.

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| **Arkansas State University-Jonesboro**  **Degree:**  **Major:**  **Year:** | | | | | | | | |
| Students requiring developmental course work based on low entrance exam scores (ACT, SAT, ASSET, COMPASS) may not be able to complete this program of study in eight (8) semesters. Developmental courses do not count toward total degree hours. **Students having completed college level courses prior to enrollment will be assisted by their advisor in making appropriate substitutions. In most cases, general education courses may be interchanged between semesters.** A minimum of 45 hours of upper division credit (3000-4000 level) is required for this degree. | | | | | | | | |
| **Year 1** | | | |  | **Year 1** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
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| **Year 2** | | | |  | **Year 2** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
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| **Total Hours** |  |  |  |  | **Total Hours** |  |  |  |
| **Year 3** | | | |  | **Year 3** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
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| **Total Hours** |  |  |  |  | **Total Hours** |  |  |  |
| **Year 4** | | | |  | **Year 4** | | | |
| **Fall Semester** | | | |  | **Spring Semester** | | | |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
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| **Total Hours** |  |  |  |  | **Total Hours** |  |  |  |
| **Total Jr/Sr Hours \_\_\_ Total Degree Hours \_\_\_** | | | | | | | | |
| **Graduation Requirements:** | | | | | | | | |