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

**NEW CERTIFICATE PROGRAM FORM**

(Also requires Arkansas Department of Higher Education (ADHE) approval)

**[ ] Undergraduate Curriculum Council**

**[X] Graduate Council**

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 | 2/7/2020 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| Brandon Kemp | 2/7/2020 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Abhijit Bhattacharyya | 2/7/2020 |

**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)

Alexandr M. Sokolov

asokolov@astate.edu

870-972-3635

1. **Name of proposed Certificate Program (Program must consist of 6-21 semester credit hours):**

Certificate in General Engineering Management

1. **Proposed effective date:**

FALL 2020, 8/15/2020

1. **Reason for proposed program implementation:**

There is an underlying need for more and more students to obtain a certificate in General Engineering Management. The ever-growing and changing job market is seeing a need for more graduates to have skills and knowledge relating to Project Management, Supply-Chain/Logistics, Safety, and Quality. A General Engineering Management certificate allows A-State graduates to be competitive in today’s job market. Many students already have graduate degrees and want to deepen their expertise. Others are not sure whether a master’s is necessary or even feasible for them. Allowing students at A-State to complete a Certificate in Engineering Management means that our students will have more options as to how to improve their lives. This gives students who are ready to pursue graduate-level studies the chance to take a deep dive into an area that interests them or can further their career without having to take on the full requirements of the Engineering Management Master’s program. Earning a certificate takes less time and is more affordable than earning a master’s degree in Engineering Management. It’s an accessible option for people who need to build relevant useful skills in a short time. Due to necessity as jobs rapidly evolve due to technological advancements, for various factors such as automation, robotics, and artificial intelligence are likely to disrupt many industries further. And even skilled jobs are at risk of becoming obsolete as these technologies evolve. A more extensive range of credentials combined with a more accessible way of earning them via online capabilities means a better-educated, better-prepared workforce for not only Arkansas but the world.

1. **Provide the following:**
	* 1. Curriculum outline - List of courses in new program – Underline required courses

Students can take any combination of 12 hours of these courses

EGRM 6003, Engineering Statistics

EGRM 6013, Quality Control and Improvement

EGRM 6023, Engineering Management I

EGRM 6033, Engineering Management II

EGRM 6043, Operations Research

EGRM 6053, Advanced Engineering Economy

EGRM 6063, Engineering Law and Ethics

EGRM 6073, Special Problems in Engineering

EGRM 6083, Project Management for Engineers

EGRM 6093, Value Engineering

EGRM 6103, Entrepreneurship for Engineers

EGRM 6113, Finance and Budgeting for Engineering

EGRM 6123, Human Resource Management for Engineers

EGRM 6143, Industrial Material Handling

EGRM 6163, Logistics and Supply Chain

* + 1. Total semester credit hours required for proposed program

12

* + 1. New courses and new course descriptions

N/A

* + 1. Program goals and objectives
* Graduates of the Certificate of General Engineering Management program will be able to identify critical issues, formulate realistic solutions, evaluate alternatives, and solve technical problems.
* Graduates of the Certificate of General 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 Certificate of General 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 Certificate of General Engineering Management program will be able to function effectively as a member or leader on a technical team.
	+ 1. Expected student learning outcomes
* Graduates of the Certificate of General Engineering Management program will be able to identify critical issues, formulate realistic solutions, evaluate alternatives, and solve technical problems.
* Graduates of the Certificate of General 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 Certificate of General 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 Certificate of General Engineering Management program will be able to function effectively as a member or leader on a technical team.
	+ 1. Documentation that program meets employer needs

A WorkForce Analysis has been completed by the ADFA.

* + 1. Student demand (projected enrollment) for proposed program

5 students a semester within the first 5 years, then this will start to gradually increase to over 10 a semester.

* + 1. Program approval letter from licensure/certification entity, if required (attach)

N/A

* + 1. Name of institutions offering similar programs and the institution(s) used as model to develop proposed program

Old Dominion University

* + 1. Proposed program review date (within 10 years of program implementation)

Spring 2029

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

ON-Campus and also 100% via distance delivery

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

YES

1. **Will this program be offered off-campus?** NO
	1. **If yes, identify the off-campus location**

 Enter text...

**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.**  |

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.

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 |

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| **GRADUATE CERTIFICATES** |
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| Addiction Studies  |
| Clinical Mental Health Counseling |
| Computer Science Education |
| Cyber Security |
| Data Science |
| Dyslexia |
| Building Level Administration |
| Curriculum Director |
| ***General Engineering Management*** |
| Gifted, Talented, and Creative Director |
| Instructional Specialist - Gifted, Talented and Creative |
| K-12 Special Education |
| Superintendent |
| Family Nurse Practitioner |
| Health Communication |
| High Performance Computing |
| History |
| Marketing |
| Nurse Administration |
| Play Therapy |