ENGINEERING MANAGEMENT ANALYTICS GRADUATE CERTIFICATE

Supporting Documentation

a.   Curriculum outline - List of courses in new program - Underline required courses.

EMGT 5703 Probability and Statistics for Engineering Management

EMGT 5053 Tradeoff Analytics for Engineering Management

INEG 5443 Decision Models

Electives (select one)

OPAN 5003 Introduction to Operations Analytics

OMGT 5653 Introduction to Data Analytics for Operations Managers

INEG 5433 Cost Estimation Models

EMGT 5793 Risk Management

b.   Total semester credit hours required for proposed program (Program range:  CP: 6-21 SCH,

TC: 21-45 SCH, GC 12-21 SCH)

12

c.   New courses and new course descriptions

None. Certificate uses existing courses.

d.   Program goals and objectives:

*Program Goals:*

Provide internationally competitive and industry recognized education to meet emerging needs of engineering, engineering management, and operations management professionals.

Prepare students to assume engineering management technical and leadership roles in industry and government employing engineering management analytics principles and practices.

*Program Objectives:*

Select and apply the appropriate engineering management analytics method to improve engineering management processes to achieve the organizational mission

Be able to plan and lead projects to improve engineering management analytics tools for dealing with market, technology, and competition uncertainties in the design and development of new products and services

Concisely communicate to decision makers.

e.   Expected student learning outcomes:

Develop broad competencies in engineering management analytics principles and practices.

Demonstrate skills to lead engineering management analytics projects and provide new or improved visualization of data

Apply problem-solving using engineering management analytics techniques for dealing with market, technology, and competition uncertainties

f.   Documentation that program meets employer needs.

Professional organization surveys and market research indicating employer desires of skills. Meetings with local industry indicate engineering management analytics as a skill they utilize that is consistently lacking and needed. Discussions with employers and students during career fairs and conferences reinforces the need for operations management proficiency.

g.   Student demand (projected enrollment) for proposed program.

Based on student surveys and feedback from students, from site coordinators/advisors, we anticipate a first-year enrollment of 20. This method was a very good predictor of enrollments for previous certificates.

h.   Program approval letter from licensure/certification entity, if required

N/A

j.   Scheduled program review date (within 10 years of program).

2028-2029