Wilkes University Curriculum Committee
PROPOSAL SUBMITTAL FORM

Directions:

- Use this set of forms for all proposals sent to the Curriculum Committee.
- Pages 1-3 of this document are required. Any unnecessary forms should be deleted from the packet before submissions. If multiple forms are needed (course addition, course deletion, etc), simply copy and paste additional forms into this packet.
- Note that all new programs (majors and minors), program eliminations, significant program revisions and all general education core revisions must be reviewed and approved by the Provost and Academic Planning Committee (APC) prior to submission to the Curriculum Committee. The Provost will make the decision if a program revision requires APC review.
- Completed and signed forms are due no later than the second Tuesday of every month. Submit one signed original hard copy and a scanned electronic copy with all signatures to the Chair of the Curriculum Committee.

1. Originator: Henry Castejon, Chairperson
   Yong Zhu
   Perwez Kalim
   Ali Razavi
   Carole Baddour
   Mohsen Ghamari
   William Greiner
   Xiaoming Mu
   Jamel Ghorieshi
   Edward Bednarz
   Mechanical Engineering and Engineering Management
   570-408-6034, yong.zhu@wilkes.edu

2. Proposal Title: Program Revision for the Master of Science in Engineering Management

3. Check only one type of proposal: (double click on the appropriate check box and change default value to “checked”). Each different type of proposal must be submitted on a separate form.
   - ☐ New Program. (Major or Minor Degree Programs). This requires prior review and approval by the Provost and APC. Major = minimum of 30 credits, minor = minimum of 18 credits.
   - ☐ New Concentration, Track, or Certificate. The Provost determines if review and approval by APC is necessary. Concentration – minimum of 12 credits, certification, endorsement and track are discipline specific.
   - ☑ Program Revision. Significant revisions to a program require review and approval by the Provost. The Provost determines if review and approval by APC is necessary.
   - ☐ General Education Revision. Submissions only accepted from the General Education Committee (GEC). Must be reviewed and approved by the Provost.
   - ☐ Creation of new departments, elimination of existing department. This requires prior review and approval by the Provost and APC.
   - ☐ Course additions or deletions not affecting programs (such as elective courses, transition of “topics” courses to permanent courses).
   - ☐ Change in course credit or classroom hours.
   - ☐ Incidental Changes. Includes changes in course/program title, course descriptions, and course

Revised 4/30/2018
prerequisites. (Although these changes do require approval by the Curriculum Committee, they do not go before the full faculty for approval).

☐ Other (Specify)

Indicate the number of course modification forms that apply to this proposal:

- Course Addition Form (Attach Syllabi: refer to Faculty Handbook for requirements)
- Course Deletion Form
- Course Change Form

4. Executive Summary of Proposal.

Briefly summarize this proposal. The breadth and depth of this executive summary should reflect the complexity and significance of the proposal. Include an overview of the proposal, background and reasoning behind the proposal and a description of how the proposal relates to the mission and strategic long-range plan of the unit and/or university. For incidental changes a one or two sentence explanation is adequate.

The first key theme of Wilkes’ strategic plan (Gateway to the Future: The Wilkes University Strategic Plan 2014 - 2020) is fostering excellence in academic programs. This serves as a blueprint for enhancing the Master of Science (MS) in Engineering Management program in order to help our students prepare for careers in ever-changing fields around the world or career advancement opportunities within their current organization.

The Bureau of Labor Statistics projects that jobs for engineering managers will grow 6% by 2016, with nearly 10,000 new roles added during that time. According to BestColleges.com, most of the Master of Science in Engineering Management programs in US require between 30 and 36 credits to graduate. It usually takes a full time student two years to complete the requirements.

The current Master of Science in Engineering Management program at Wilkes University requires 36 credits to graduate, among which 27 credits are mandatory core courses and 9 credits are electives. During the spring 2019 semester, there are a total of 13 registered Engineering Management majors: 9 undergraduate students and 4 graduate students. All four MS students are part-time learners with a total of 18 credits registered (3, 3, 6, and 6 credits respectively). The above described data is summarized in the table below.

<table>
<thead>
<tr>
<th>Table 1. Overview of the current state of the Engineering Management Program at Wilkes (Spring 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Undergraduate Students</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Number of graduate Students</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

The combination of relatively large number of mandatory course offering requirements (27 mandatory credits to graduate) and extremely low number of MS students/credit hours (18 credit hours total this semester) in the MS engineering management program makes course offering particularly challenging (i.e. one or two students in mandatory courses). In the long run, it makes the program financially unsustainable.

Revised 4/17/2018
In order to improve our master of science in engineering management program to better serve the needs of engineering professionals in northeastern PA and beyond. The goal of this curriculum revision is to create a leaner, more effective, more affordable and financially sustainable Master of Science program in engineering management at Wilkes. In order to achieve this goal, the following key changes are proposed:

1. Reduced the total required credits to complete the program from 36 to 30.
2. Reduced the mandatory course credits from 27 to 15.
3. Among the 15 mandatory credits, EGM536 Product Design and Development will be cross listed with a MSME mandatory course ME411 Product Development to further reduce the mandatory course offering pressure.
4. Change the elective credits from 9 to 15 so that the students can have the freedom to choose any approved upper level engineering, business or MBA courses. This not only reduces the pressure of course offering, it also improves the breadth and depth of the program.
5. Eliminate the six credit thesis option while retaining the three credit project option.
6. Continue to develop in-house expertise in engineering management at Wilkes instead of mainly relying on adjunct faculties.

The proposed new curriculum will lead to student excitement and a real interest which in turn leads to increased enrollment. This will also enhance another key theme of Wilkes’ strategic plan: Recruit, retain, place and graduate undergraduate and graduate students.

5. Other specific information. (Not applicable for incidental changes.)

What other programs, if any, will be affected by this proposal? Describe what resources are available for this proposal. Are they adequate? What would be the effect on the curriculum of all potentially affected programs if this proposal were adopted? Include any potential effects to the curriculum of current programs, departments and courses.

The proposed changes in the MS of engineering management program will not affect any other program’s requirements. The proposed courses are all existing courses. No new courses are being created. The mandatory courses will be taught by the mechanical engineering and engineering management department faculty and adjuncts. However, the implementation of a rotation system for the courses delivery will reduce the dependence on adjuncts and make the program more financially sustainable. The course alignment also increases the engineering component of the program and its reliance on the external entities.

6. Program Outline. (Not applicable for incidental changes).

A semester-by-semester program outline as it would appear in the bulletin for a new program or any modified program with all changes clearly indicated.

Revised 4/17/2018
Proposed Curriculum Changes for the Master’s Program in Engineering Management (change from 36 Credits to 30 credits)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGM-510—Engineering Project Decision Processes (3</td>
<td>EGM-520—Operations Analysis and Resource Allocation (3</td>
</tr>
<tr>
<td>credits)</td>
<td>credits)</td>
</tr>
<tr>
<td>EGM-525—Product Analysis and Resource Allocation (3</td>
<td></td>
</tr>
<tr>
<td>credits)</td>
<td>EGM-515—Quality Processes for Design and Production</td>
</tr>
<tr>
<td>EGM-536—Product Design &amp; Development (3 credits)</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>EGM-530—Stochastic Models in Engineering Management</td>
<td>MBA-501—Foundation of Statistics (3 credits)</td>
</tr>
<tr>
<td>Technical Elective (3 credits)</td>
<td>Technical Elective (3 credits)</td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>EGM-516—at Management Science (3 credits)</td>
<td>EGM-590/591—Graduate Thesis</td>
</tr>
<tr>
<td>MBA-505—at Foundations of Management (3 credits)</td>
<td>Plus one Technical Electives (total 9 credits)</td>
</tr>
<tr>
<td>Technical Elective (3 credits)</td>
<td>Or EGM-580/581—Graduate Project</td>
</tr>
<tr>
<td>MBA-552—at Organizational Behavior and Leadership</td>
<td>Plus two Technical Electives (total 9 credits)</td>
</tr>
<tr>
<td>Technical Elective (3 credits)</td>
<td>EGM-580/581—Graduate Project (3 credits)</td>
</tr>
<tr>
<td></td>
<td>or one Technical Elective (3 credits)</td>
</tr>
<tr>
<td></td>
<td>or Three Technical Electives (total 9 credits)</td>
</tr>
</tbody>
</table>

7. New Program Assessments: (For new programs ONLY)

All new major programs reviewed through the Curriculum Committee must complete this section. Please consult the following page for guidance in developing an assessment plan: https://wilkes.edu/about-wilkes/university-committees/assessment/assessment-planning.aspx

a. Please list program-level student learning outcomes (SLOs) that all program majors should be able to demonstrate upon graduation from the program. SLOs should be worded such that student performance can be measured directly.

Insert Text Here...

b. Please briefly describe current plans for how student performance on each program-level SLO will be assessed. Be sure to answer where (which courses), when (frequency), and how (assessment method) for each SLO.

Insert Text Here...

c. Please identify by name any external accreditation agency or agencies that will influence assessment planning. Include standards or requirements from that accreditor that must be

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followed when developing the program’s assessment plan. *You are encouraged to share specific, current web links to relevant content when standards or requirements related to assessment are substantial.*

Insert Text Here…

8. Signatures and Recommendations. (please date)
   - Signatures of involved Department chair(s) and Dean(s) indicate agreement with the proposal and that adequate resources (library, faculty, technology) are available to support proposal.
   - If a potential signatory disagrees with a proposal he/she should write “I disagree with this proposal” and a signed statement should be attached to this submission.

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Henry J. Carleppen

Print Name/Title
Department chair(s) of all potentially affected programs

Feb. 04, 2019
Date

Interim Dean
PRAHLAD MURTHY

Print Name/Title
Dean(s) of any potentially affected College/School.

CSE
Signature
2-4-19
Date

Interim Dean
PRAHLAD MURTHY

Print Name/Signature
Date

SUSAN Hritzak
Registrar
2-4-19

Anne Schrader
Print Name
Signature
Date

Provost (For new programs, significant revisions and revisions to the General Education Program revisions only).

Provost should check here ___ if this proposal is a program revision AND the significance of the revision requires review and approval by APC prior to Curriculum Committee.

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Print Name
Chair, Academic Planning Committee. For new programs, program revisions sent via the provost. Signature indicates that the proposal has been reviewed and approved by APC.

Signature
Date

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Print Name
Chair, General Education Committee. For revisions to General Education program only. (Signature indicates that the proposal has been approved by GEC).

Signature
Date

Revised 4/17/2018
Wilkes University Curriculum Committee
COURSE CHANGE FORM

Directions: Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

Course Number: MBA501
Course Title: Foundations of Statistics
Effective Date of Course Change (semester/year) Fall 2019

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Credit hours. (Indicate classroom, lab or “other” hours.</td>
<td>3</td>
</tr>
<tr>
<td>Course Prerequisites</td>
<td>Core course for master of science in engineering management</td>
</tr>
</tbody>
</table>
| Course Description (as proposed for Bulletin)
1 | This course introduces the foundation of probability and statistics used in management and covers the basics of data analysis and display, descriptive measures. In addition, this course is designed to teach the basic and advanced features and functions of Excel, including summative, descriptive and reporting techniques. | The same |

1 Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.
Wilkes University Curriculum Committee
COURSE CHANGE FORM

Directions: Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

Course Number: MBA505
Course Title: Foundations of Management

Effective Date of Course Change (semester/year): Fall 2019

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>MBA-505—Foundations of Management</td>
<td>MBA-505—Foundations of Management</td>
</tr>
<tr>
<td>Course Credit hours. (Indicate classroom, lab or “other” hours.)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Course Prerequisites</td>
<td><strong>Core course</strong> for master of science in engineering management</td>
<td><strong>Elective course</strong> for master of science in engineering management</td>
</tr>
<tr>
<td>Course Description (as proposed for Bulletin)¹</td>
<td>No longer offered</td>
<td>No longer offered</td>
</tr>
</tbody>
</table>

¹ Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.
Wilkes University Curriculum Committee  
COURSE CHANGE FORM

**Directions:** Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

**Course Number:** MBA552  
**Course Title:** Organizational Behavior and Leadership

**Effective Date of Course Change (semester/year):** Fall 2019

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Title</strong></td>
<td>MBA-552 – Organizational Behavior and Leadership</td>
</tr>
</tbody>
</table>
| **Course Credit hours.**  
(Indicate classroom, lab or “other” hours. ) | 3 | 3 |
| **Course Prerequisites** | Core course for master of science in engineering management | Elective course for master of science in engineering management |
| **Course Description**  
(as proposed for Bulletin)\(^1\) | The purpose of this course is to examine organizational and leadership issues in the private and not-for-profit sectors. The course emphasizes how to become an effective leader by achieving mastery over the noisy, incessant, and rapidly changing environment. The course focuses on three central issues: (1) what makes a person an effective leader; (2) how does a leader encourage high performance and build commitment; and (3) how does a leader translate intention into reality, communicate those intentions, empower others, and stay on course while knowing when to change. | The same |

\(^1\) Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.

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Wilkes University Curriculum Committee
COURSE CHANGE FORM

Directions: Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

Course Number: EGM-525
Course Title: Product Analysis and Resource Allocation
Effective Date of Course Change (semester/year): Fall 2019

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title</td>
<td>EGM-525 Product Analysis and Resource Allocation</td>
</tr>
<tr>
<td>Course Credit hours. (Indicate classroom, lab or “other” hours.)</td>
<td>3</td>
</tr>
<tr>
<td>Course Prerequisites</td>
<td>Core course for master of science in engineering management</td>
</tr>
<tr>
<td>Course Description (as proposed for Bulletin)¹</td>
<td>A study of critical issues in the management of engineering projects including proposal development, mobilization, scope change, completion and termination. Performance metrics are considered in planning and tracking project cost, schedule, and resource requirements with CPM/PERT algorithms. Case discussions and a term project are included in the course. Required of all students. Three hours lecture per week.</td>
</tr>
</tbody>
</table>

¹ Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.
Wilkes University Curriculum Committee
COURSE CHANGE FORM

Directions: Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

Course Number: EGM-530
Course Title: Stochastic Models in Engineering Management
Effective Date of Course Change (semester/year) Fall 2019

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Title</strong></td>
<td><strong>Course Title</strong></td>
</tr>
<tr>
<td><strong>Course Credit hours.</strong> (Indicate classroom, lab or “other” hours.)</td>
<td><strong>Course Credit hours.</strong> (Indicate classroom, lab or “other” hours.)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Course Prerequisites</strong></td>
<td><strong>Course Prerequisites</strong></td>
</tr>
<tr>
<td>Core course for master of science in engineering management</td>
<td>Elective course for master of science in engineering management</td>
</tr>
<tr>
<td><strong>Course Description (as proposed for Bulletin)</strong></td>
<td><strong>Course Description (as proposed for Bulletin)</strong></td>
</tr>
<tr>
<td>A review of engineering analytical methods and their application in strategic decision environments. Required case studies will require techniques such as Monte Carlo simulation, risk assessment, and failure modeling as the suitability and application of several engineering analytical approaches to operational analysis of business/industry decision processes. Required of all students. Three hours lecture per week.</td>
<td>The same</td>
</tr>
</tbody>
</table>

1 Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.

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COURSE CHANGE FORM

**Directions:** Use this form to change information relating to an existing course. Please note, changes to course number require separate course addition/deletion forms (not this form!). Only indicate changes that are proposed (existing and proposed), other fields should be left blank.

**Course Number:** EGM-536
**Course Title:** Product Design & Development

**Effective Date of Course Change (semester/year):** Fall 2019

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course Title</strong></td>
<td>EGM-536 Product Design &amp; Development</td>
</tr>
<tr>
<td><strong>Course Credit hours.</strong> <em>(Indicate classroom, lab or “other” hours.)</em></td>
<td>3</td>
</tr>
<tr>
<td><strong>Course Prerequisites</strong></td>
<td><strong>Elective course</strong> for master of science in engineering management</td>
</tr>
<tr>
<td><strong>Course Description</strong> <em>(as proposed for Bulletin)</em></td>
<td>This course focuses on the integration of the design, manufacturing, the ability to coordinate multiple interdisciplinary tasks and marketing functions in the process of creating new products. The course is intended to provide students with the necessary set of tools and methods for new product design and development. Several design frameworks are discussed in order to achieve a common objective. This course will reinforcement students specific knowledge from other courses through practice and reflection in an project-oriented setting. Three lecture hours per week.</td>
</tr>
</tbody>
</table>

1 Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.

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