Engineering and Technology Management
Justification for Conjoint Courses

Motivation:
The Engineering and Technology Management Program (ETM) is proposing to add six new undergraduate courses to be offered conjointly with the corresponding established graduate-level courses. The proposed new courses include E M 401 (Management of Organizations), E M 403 (Managing Variability Using Statistics), E M 420 (Contract Project Management), E M 422 (Leadership, Supervision and Management), E M 438 (Lean Agility) and E M 470 (Six Sigma Quality Management).

The purpose of this request is to allow individuals who have Associate Degrees and are presently employed in technical firms to take coursework that would lead to informal undergraduate certificates awarded by the College of Engineering and Architecture that are similar to our popular graduate-level ETM certificates. The demand for these proposed courses results from a recently-awarded federal grant to the State of Washington through the Innovate Washington Foundation under the President’s “Make it in America” Challenge Grant Program. Through this grant, funding is available for the education and training of employees in small and medium manufacturing enterprises located in 25 economically distressed counties in the State of Washington. The ETM program at WSU has been targeted as the provider of coursework leading to 5 certificates important to these manufacturing firms.

Rationale:
It is important to understand that this request for conjoint classes is not the more typical request which adds to established undergraduate courses a graduate course number. Rather, we are requesting to allow some students to receive advanced undergraduate credit (400-level) by attending existing 500-level courses that are well established as graduate level courses. Presently, we have 400-level approved E M conjoint courses that are occasionally taken by undergraduate engineering majors in a variety of engineering disciplines to satisfy one of their technical electives, and this conjoint model has worked well for this educational environment.

We are committed to providing high-quality substantive graduate level content to our graduate students. It is imperative that we protect the quality of the student’s graduate experience because our target population is working professionals who have expectations that they will receive significant value from their ETM educational experience. These expectations could not be met if the courses we teach were tailored to undergraduate students. Thus we propose to teach the courses with graduate level content and to accommodate the undergraduate students the faculty will relax the requirements expected of graduate students on homework, exams and/or project activities. These requirements are described in detail by the individual faculty at the beginning of each course and are outlined in the course syllabus provided with the major curricular change forms. What makes this approach feasible is the fact that this is a professional degree program with content which relates to the management of technology and engineering. We are not teaching higher level technical content like one might find in graduate-level, discipline-specific, STEM courses.

The ETM program has plans to further protect the integrity of the graduate level experience. If there is sufficient undergraduate enrollment in a given course, we will teach the undergraduates as a separate section.

Finally, our faculty meet in retreats twice a year and time is dedicated to program assessment. During these meetings we will evaluate critically each of the conjoint courses to ensure that the graduate student’s learning experiences are not compromised.