

**FS P&BC Report to FS APC (11/23/2024) on proposed
Graduate Certificate in Analytics for Engineering Decision Making (AEDM) in SSoE**

Overview (from SSoE Proposal on August 20, with November 19 revisions (underlined)):

Industrial Engineering (IE) is proposing a graduate certificate entitled “Analytics for Engineering Decision Making (AEDM)” to be offered both as F2F and OL programs. The main goal of this certificate is to address the growing needs for analytics and data-driven engineering decision making, both at the regional and national level. The overall goal is to develop engineering talent that is equipped with operational decision analytics skills, including both predictive and prescriptive skills. This certificate aims to prepare an engineering workforce for wide range of organizations (businesses, non-profit, NGOs, etc.) in the US. The certificate will be available in two formats: 100% online and on-campus. The certificate will require students to complete 9 credit hours of graduate engineering course work. Students in the Master of Science in Industrial Engineering (MSIE) and Master of Engineering in Engineering Management Online (MEEMO) will be able complete the certificate within their academic plan at no additional tuition charge or program credit hour requirements. Non-degree seeking students completing the stand-alone AEDM may count the 9 credit hours towards their future MSIE and MEEMO degree. Upon completion, students will acquire core knowledge on data analytics in engineering decision making. The proposed certificate uniquely combines three subareas of Industrial Engineering, namely Data Analytics, Operations Research, and Decision Making.

Assessment:

The proposed budget spreadsheet gives data for Certificate students only since others are current engineering degree-seeking students who will not pay additional tuition. The projected Unit Tuition-Share is based on the assumption that a Certificate-only student will complete the 9 credit-hour certificate within 2 semesters. The budget projects 1-2 full-time and 2-3 part-time students for the first year to reach 5-8 full-time and 10-12 part-time engineering students by year four. Projected tuition revenue is based on the lower enrollment projection per year.

The proposed budget only has expenses for marketing since all courses are taught by current faculty at less than class capacity.

Conclusion: The proposed Certificate program projects to be financially self-supporting to reach projected annual profitability of \$77,000 by the 4th year. Likewise, the proposed program is very unlikely to become a “cost center” to A&S or to the University. P&BC does not see any academic or student-market overlaps with the existing Graduate Certificate program in the COB. P&BC does not see any adverse financial aspects for faculty or students and recommends approval of the budget proposal as a reasonable fiscal endeavor.

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