

TOPIC: PROPOSAL TO OFFER A BACCALAUREATE DEGREE IN ENGINEERING AT FORT LEWIS COLLEGE

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I. SUMMARY

Fort Lewis College has submitted a proposal to offer a Baccalaureate of Science degree in Engineering. This degree set in a liberal arts curriculum will provide great flexibility in curricular and career pathways, allowing for multidisciplinary experiences and novel combinations of expertise. There are three specific goals to the proposed BS in Engineering – to provide graduates with the fundamental technical skills and knowledge required for success in the engineering profession, or in graduate or professional study; to provide graduates with additional skills and knowledge necessary for success in a professional environment, including clarity in communication, ability to work in a team, an understanding of professional and ethical responsibilities, and recognition of the need for lifelong learning; and, finally, to prepare graduates for a broad range of career paths to pursue.

II. BACKGROUND

The following is summarized from Fort Lewis College's proposal to offer a BS in Engineering:

Delivering an engineering program within a liberal arts context offers an excellent opportunity to prepare students for tackling the increasingly complex and interdisciplinary problems of the twenty-first century. Solving these problems will require a broad understanding of both the technical issues and the social and global context of these challenges. An engineering program delivered within the liberal arts provides the ideal setting to train students in the engineering discipline while at the same time preparing them to address and solve these complex problems with a proper understanding of the global, cultural, and social context. This is the concept of the "new liberal arts". It goes beyond the boundaries of traditional liberal arts by creating a synergy between the wizened, centuries old liberal arts education and the dynamic, responsive, nature of modern, problem solving of engineering. This union results in a whole that is more powerful than either of the constituent parts.

ROLE AND MISSION SUPPORT

The BS in Engineering degree supports the role and mission of Fort Lewis College. The statutory mission states:

There is hereby established a college at Durango, to be known as Fort Lewis College, which shall be a public liberal arts college, with selective admission standards with a historic and continuing commitment to Native American education. In addition, the college may offer professional programs to serve regional needs. The center of southwest studies provides a valuable regional, national and international source. C.R.S. 23-52-101 (1)

EVIDENCE OF DEMAND

This program offers a new opportunity for our current students, the citizens of southwest Colorado and the Four Corners region, and the Native American populations across the nation to earn a nationally recognized engineering degree. Our existing Engineering-Physics program is officially a Physics degree option which includes many engineering courses. This new degree is an engineering degree which is customizable to allow emphasis in traditional engineering sub-disciplines, such as mechanical, electrical, and civil engineering. This type of program is in high demand from most of our student clientele, who indicate overwhelmingly that they would prefer to stay at Fort Lewis College rather than transfer to an engineering program at a larger university, and would stay if a BS in Engineering were in place. Increasing numbers of engineering career opportunities require an engineer with a broad background, or with training in more than one subfield. The proposed program will permit Fort Lewis College to offer a degree meeting this need, allowing our graduates to compete in this market. The increased enrollment and retention made possible by this program will allow the Department of Physics and Engineering to become a substantial revenue generating program for Fort Lewis College.

DUPLICATION/SIMILAR PROGRAMS IN THE STATE

There are no other four-year liberal arts colleges in Colorado offering this program. Colorado School of Mines is the only Colorado school that offers this degree. There are currently 34 colleges and universities in the United States offering a similar degree. Only nine of the 34 colleges are similar to Fort Lewis in size.

III. STAFF ANALYSIS

The Department staff has reviewed this proposed program to ensure that it meets the State's performance measures outlined in C.R.S. 23-1-107. The program meets all performance measures.

IV. STAFF RECOMMENDATIONS

Staff recommends that the Commission approve the BS in Engineering degree to be offered by Fort Lewis College.

V. STATUTORY AUTHORITY

C.R.S. 23-1-107

ACCOMPANYING MATERIALS

Copies of all relevant materials are on file in the Academic Affairs office and are available upon request.