TOPIC: PROPOSAL TO OFFER A MASTER OF APPLIED STATISTICS DEGREE AT COLORADO STATE UNIVERSITY

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I. SUMMARY

This consent item recommends approval of Colorado State University's (CSU) proposal to offer a degree in Master of Applied Statistics (MAS).

II. BACKGROUND

The following is summarized from Colorado State University's proposal:

> In comparison to CSU's Master of Science (MS) in Statistics, the MAS will emphasize practical methods in statistics with less of a focus on theoretical development. The MAS curriculum will cover more topics but not in as great theoretical depth as the MS. The MAS is intended for students with undergraduate backgrounds in math, science, social science, or business fields who see the need for additional education and training but do not want to pursue a research career path or PhD. The program can be completed in one year, from July through June.

ROLE AND MISSION SUPPORT

This degree supports the role and mission of Colorado State University. The statutory mission states:

> *There is hereby established a college at Ft. Collins, to be known as Colorado state university. Colorado state university shall be a comprehensive graduate research university with selective admission standards offering a comprehensive array of baccalaureate, master's, and doctoral degree programs. Consistent with the tradition of land grant universities, Colorado state university has exclusive authority to offer graduate and undergraduate programs in agriculture, forestry, natural resources, and veterinary medicine. The Colorado commission on higher education, in consultation with the board of governors of the Colorado state university system, shall designate those graduate level programs that are the primary responsibility of Colorado state university. C.R.S. 23-31-101*

EVIDENCE OF NEED

> Nationwide, there are only a handful of one year professional masters programs in applied statistics. The MAS will prepare students to be competent practitioners of statistics, able to apply a wide variety of existing methods to analyze data from the sciences, business, economics, and medicine fields just to name a few. There is an

expectation of strong demand for this degree from many groups of potential students. These include students with many different undergraduate backgrounds, not necessary statistical, who see the need for additional statistics knowledge but are not attracted to the traditional MS programs because of the time commitment and the requirement for a stronger background in mathematics; working professionals whose employers would like them to expand their statistical skills; CSU statistics or actuarial science students seeking a fifth-year masters degree; and CSU PhD students in other fields who want to acquire a secondary degree in statistics.

DUPLICATION

The proposed program will be a departure from any statistics related degree currently offered in the state and serves an entirely new market. In particular, there is no other degree that offers such a range of topics in a one year program, having an emphasis on applications, and taught by top quality research university professors. The following is a summary of available degrees and an explanation as to how each is fundamentally different from the proposed MAS. The MS CSU currently offers is a two year degree that prepares students for PhD work. The University of Colorado Boulder offers a MS in Applied Mathematics with a concentration in probability and statistics but differs from the proposed program because it is a two year program. It has much more technical math classes and a higher level of pre-requisites required. The University of Colorado Denver has an MS in Applied Mathematics with a concentration in statistics. It is different from the proposed MAS because it is a more technical degree and the classes include graduate level, real analysis, and high level mathematical statistics. The University of Northern Colorado also offers an MS in Applied Statistics and Research Methods. This degree is less technical with lower level classes and is designed for analyzing data in education and psychology fields. Denver University offers an MS in Business Intelligence through its Department of Statistics and Operations Technology. This degree is heavy with business course and has limited range of statistics methods.

III. STAFF ANALYSIS

Pursuant to Colorado Revised Statutes 23-5-129 (6)(b), department staff finds that CSU's proposed Master of Applied Statistics (MAS) degree is consistent with Colorado State University's role and mission.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve Colorado State University's proposal to offer a Master's of Applied Statistics (MAS) degree.

V. SUPPLEMENTAL INFORMATION

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

STATUTORY AUTHORITY

C.R.S. §23-5-129
(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:
(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.