

**TOPIC: PROPOSAL TO OFFER A MASTER’S OF SCIENCE IN
EDUCATION IN MATHEMATICS EDUCATION AT THE
UNIVERSITY OF COLORADO DENVER**

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FOR ACADEMIC AFFAIRS**

I. SUMMARY

This consent item recommends approval of the University of Colorado Denver’s (UCD) proposal to offer a Master’s of Science in Education (MSEd) in Mathematics Education.

II. BACKGROUND

Pursuant to C.R.S. §23-1-121 the Colorado Commission on Higher Education considers approval of all educator preparation programs at public and private institutions of higher education. Because this degree does not lead to a recommendation for licensure by the Colorado Department of Education, an affirmative recommendation from the State Board of Education is not required.

The proposed MSEd program does not lead to licensure. Nonetheless, because the proposed program is, pursuant to the institution’s proposal, intended for practicing teachers and is designed to “carry out research-informed teaching in their own classrooms,” DHE staff reviewed the program according to the requirements of the state’s educator preparation standards (C.R.S. §23-1-121).

The DHE’s review of educator preparation programs includes the following activities related to statutory performance criteria (where applicable): admission system; advising and screening of candidates; integration of theory and practice in coursework and field based training; supervised field based experience; and assessment of candidates’ subject matter and professional knowledge and ability to apply the professional knowledge base (C.R.S. §23-1-121[2]), as well as implementation of a procedure for collecting and reviewing evaluative data concerning the educator preparation program, which shall include periodic surveys of graduates and employers and educator identifier system data...for modifying the program as necessary in response to the data collected (C.R.S. §23-1-121[3][b]).

III. DEPARTMENT REVIEW

Section III is summarized from UCD’s proposal:

The ultimate goal of this master's program is to promote quality and effective instruction in mathematics delivered by practicing teachers in K- 12 education... Program graduates will be well prepared to interpret and carry out research-informed teaching in their own classrooms and to provide mentoring of their peers in their schools, districts and at the state level. Students who learn this additional pedagogy will positively impact achievement across the K- 12 continuum.

ROLE AND MISSION SUPPORT

This degree supports the role and mission of UCD. The statutory mission states:

The Denver campus of the University of Colorado shall be an urban comprehensive undergraduate and graduate research university with selective admission standards. The Denver campus shall offer baccalaureate, master's, and a limited number of doctoral degree programs, emphasizing those that serve the needs of the Denver metropolitan area. The Denver campus has statewide authority to offer graduate programs in public administration and exclusive authority in architecture and planning. [C.R.S. 23-20-101(b)]

EVIDENCE OF DEMAND

Initially the program will attract students who historically were enrolled in the Curriculum and Pedagogy (C&P) master's program in the [School of Education and Human Development]. In the past years there were 145 students whose emphasis area within the MA program was mathematics education... Students with the same interest are likely to migrate to this new MEd program in mathematics education. More teachers who are interested in stronger focus on mathematics content and pedagogy will also be recruited (we project an approximate 50% increase in the first four years)... A recent analysis by the Alliance for Quality Teaching found that of the 47,358 teachers in Colorado, nine percent (~4280) were teaching mathematics. This is one of three high demand areas listed by the Colorado Department of Education. The proposed program stems out of the critical need to increase student performance and outcomes by augmenting the effectiveness of the practices of current teachers... The C&P program currently attracts practicing teachers who are interested and quite often required to improve their content knowledge in mathematics and their pedagogical competence.

DUPLICATION

The proposed program is unique in Colorado. One other institution (University of Northern Colorado) offers a similar program but it serves only secondary teachers in mathematics and does not offer an integrated degree of mathematics and mathematics education. CU Boulder offers a master's degree that tailors mathematics content course work based on prior experience in undergraduate and graduate courses. The dual focus on mathematical content and pedagogy of our proposed degree program

will provide significantly different contextualization of mathematics and mathematics education for practicing teachers from urban classrooms than the program at CU Boulder. We further believe that our proposed degree program will appeal to the target population of practicing teachers served by the [School of Education and Human Development] in the Denver metropolitan area.

IV. STAFF ANALYSIS

Pursuant to Colorado Revised Statute 23-1-121 and 23-5-129(6)(b), department staff finds that UCD's proposed MEd in Mathematics Education degree meets educator preparation statutory performance measures and is consistent with UCD's role and mission.

V. STAFF RECOMMENDATION

That the Commission approve the University of Colorado Denver's proposal to offer a Master's of Science in Education (MEd) in Mathematics Education.

VI. 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. §23-1-121 Commission directive - approval of educator preparation programs - review.

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.