

EDUCATION: SPACE STUDIES FOR EDUCATORS CONCENTRATION, MASTER OF EDUCATION

Educational researchers and policy makers agree on the fundamental requirements for successful teachers: knowledge of subjects they teach, knowledge of both general and subject-matter specific methods for instruction and assessment; knowledge of student development; and the ability to apply this knowledge with students from diverse backgrounds. The M.Ed. at CSU Pueblo is planned to impact the quality of teaching and learning in K-12 classrooms by preparing master teachers with expertise in their content disciplines, in the pedagogy of teaching and learning, and in the process of continual professional development and growth. To ensure graduates' application of new knowledge and skills, CSU Pueblo's program requires application of new knowledge and skills throughout the program and utilizes an assessment model that monitors teacher performance and provides information for ongoing program improvement.

One promising approach that has resulted in significant improvements in teaching practices is the National Board for Professional Teaching Standards (NBPTS) process for National Board Certification. The NBPTS has developed standards for effective teaching in specific subject areas and assessments geared to measure performance against the standards, as well as a process for teachers to demonstrate their performance on these standards. In addition to strengthening classroom teaching, teachers' involvement with the NBPTS program has improved student engagement, motivation, and achievement, including positive impact in low-performing schools.

The Master of Education degree is built on research on teacher change and is designed to prepare teachers to lead school reform, requiring completion of an concentration area of their choice; of a core of pedagogy courses focusing on literacy instructional technology, and differentiation of instruction; and of a core of courses focusing on professional growth. The National Board standards and certification process form the heart of the M.Ed. core and assessment process. A unique characteristic of the degree is the collaboration of faculty in teacher education and in content disciplines at the University in the design and implementation of the program.

Relationship to the Mission of Teacher Education

The Teacher Education Program has a primary mission to prepare teachers of quality and distinction through K-16 collaborations. One of the central goals of the program is its commitment to serve the region and state of Colorado through partnerships with school districts and institutions of higher education. An integral aspect of this goal is Teacher Education's formal partnership with school districts in southern and southeastern Colorado. The joint efforts of students, faculty, and administrators across all K-16 partners focus on improving the quality of learning in classrooms in elementary, secondary, and higher education. The Master of Education degree supports this mission, strengthening K-12 teachers' abilities to provide educational opportunities for their students. At Colorado State University Pueblo, preparing teachers is a

campus-wide responsibility, with faculty and administrators involved in support of the program's mission.

Graduate Admission Policies & Procedures

Admission

Regular status will be given to degree-seeking students who meet all of the following requirements:

- A baccalaureate degree from an institution accredited by the regional accreditation agency (or equivalent).
- A minimum 3.000 cumulative GPA. Conditional admission may be granted for candidates with cumulative GPAs lower than 2.500, but whose recent graduate GPA (at least 15 hours) is above 3.000
- A letter of interest that outlines the candidate's reason(s) for applying to the M.Ed. program and how they expect to both benefit from and contribute to it.
- Two recommendations from Individuals who can speak to potential success in graduate school.
- Significant teaching experience. Candidates must provide documentation of the quantity and quality of this experience within their letter of interest.

International students whose native language is not English must also meet the English language proficiency standard set forth in the *Graduate Admissions* section of the CSU-Pueblo Catalog.

Continuation

To continue in the program, students must maintain a cumulative GPA of 3.000.

Program Completion

All students must fulfill the following requirements for a graduate degree:

- A cumulative graduate GPA of 3.000 or better at graduation. A maximum of six semester hours of course work at the grade of C+ or C may be applied toward graduation. A maximum number of nine semester hours of transfer credit may be applied to the degree.
- Regular student status.
- The program's minimum number of hours of approved course work (38 semester hours).
- Completion of a final portfolio review and oral examination. The portfolio project includes a directed research project.
- Submission of a graduation planning sheet signed by the student's graduate advisor and program director, in accordance with published deadlines during the semester is to occur. The deadline for submission is published in the *Semester Notes, University Calendar, and CSU Pueblo Catalog*.

Graduate Program Goals & Student Outcomes

As teachers proceed through the program, they will be asked to apply and demonstrate their growth in learning and teaching related to the following goals and outcomes.

Content Knowledge Goal

Master teachers utilize content knowledge to raise the achievement of PK-12 learners.

1. Demonstrate growth in content knowledge related to concentration area and the application of content knowledge to classroom instruction and assessment.

Pedagogy Goal

Master teachers utilize best practices in instruction and assessment to raise achievement of PK-12 learners.

1. Understand scientifically-based practices in teaching and learning, including strategies in literacy education, instructional technology, differentiation of instruction, and apply them to raise student achievement.
2. Demonstrate multiple means of assessing and evaluating student learning and use them to change teaching and learning.

Professional Development and School Reform Goal:

Master teachers understand the process for professional change in their own practice and in education, including the interpretation of educational research.

1. Locate, interpret, synthesize, and apply educational research in best practices in teaching.
2. Understand models for professional change, including teacher collaboration, professional learning communities, strategies for mentoring and coaching to facilitate change, and effective professional development.
3. Demonstrate understanding of reflective practice that results in improved classroom teaching and learning, including teacher reflection, use of technology in self-assessment, collaboration for change, and self-management of change.
4. Demonstrate understanding of system and organizational change in education, including models for school change and current research and trends in school change.

Leadership and Change Agent Goal:

Master teachers apply educational research, including research on school reform and professional development to raise student achievement.

1. Demonstrate responsibility for student learning at high levels.
2. Demonstrate responsibility for school reform and leadership in school change.

Program Assessment

The assessment plan for Colorado State University Pueblo's M.Ed. ensures that the program:

1. Monitors individual student progress necessary to support success,
2. Provides summative information on student proficiency on all performance-based standards, and
3. Provides reliable and valid information on the program's successes and weaknesses to ensure continuous program improvement.

The assessment design has four components:

1. Benchmarks, student outcomes and tasks aligned with the Colorado Department of Education standards for content areas leading to endorsements (Special Education, Linguistically Diverse Education, and Instructional Technology) and the National Board of Professional Teaching Standards, forming the basis for both monitoring of student success and program evaluation.

2. A series of evaluation tools that are used by faculty within courses and at program completion to assess student performance in meeting all standards.
3. A system for documenting and monitoring student progress using the student's electronic portfolio.
4. A system to identify program strengths and weaknesses resulting in continual program improvement.

Performance Standards, Program Alignment, & Evaluation Criteria

A range of tasks aligned to program standards, curriculum and instructional activities throughout the program provide multiple sources of evidence to assess performance on each program standard. These tasks include a range of examples of teaching and learning, most of them authentic teaching performance, including all of the following:

- Curriculum plans: lesson plans and unit planning.
- Self evaluations and peer evaluations of teaching.
- Measures of achievement of PK-12 students: student work samples, pre-post data, and a range of assessment results.
- Standardized test scores (e.g., the PRAXIS exam for Special Education), as well as teacher-constructed exams and quizzes.
- Materials and artifacts from activities with parents, colleagues, and classroom teachers included in the master's portfolio.
- Evidence of ability to understand and utilize research to improve practice.
- Evidence of inquiry (e.g., action research, case studies) to change practice.
- Video case studies of teaching.
- Evidence of program and school change, including activities in coaching, mentoring, and professional learning communities.

Graduate students begin developing their M.Ed. portfolio with their first master's course. The portfolio is a web-based database system that is linked with a system for faculty to review materials and communicate their feedback to the student. Documents that demonstrate their performance on specific standards are added throughout the program.

Program Completion

During the final capstone course, students submit the portfolio for review by a group of three faculty. In addition to the portfolio materials, graduate students participate in an oral review of portfolio contents.

Program Completer Self-Evaluation

At the end of their final course, students will complete their own self-evaluation of their performance across program standards and an evaluation of the quality of the master's program.

Follow-Up Assessments

One year after graduating from the program, teacher education will conduct a survey, requesting feedback from each graduate about his/her teaching and about the quality of preparation at CSU Pueblo. Survey forms will be aligned with the program standards. A similar survey will be sent to each graduate's supervisor (building principal), requesting information about teaching performance.

Specific Program Requirements

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The degree is designed with three components:

1. core courses in research and professional change;
2. pedagogy courses in literacy, differentiation of instruction, and technology; and
3. courses in an concentration area chosen by the graduate student.

A unique feature of the degree is its alignment with the standards of the National Board for Professional Teaching Standards and participants' opportunity to work towards national board certification as they complete the degree.

Component 1: Core Requirements (11 hours)

Organizational change and school reform, as well as the responsibilities of professional leadership related to educational change, are emphasized in the core. The four courses in Component 1 are developmental, with the first taken within the first nine hours, the third within the last nine hours, and the final course completed as the capstone experience in the program. All courses focus on knowledge and skills related to teacher change and leadership as a change agent in the schools, concentration in interpreting and conducting research is included.

Although courses in Components 2 and 3 may be completed by teachers, degree plus or senior students who have been admitted to the Teacher Education Program and meet the 2.600 GPA requirements, admission to all Core courses requires full admission to the graduate program.

Course Requirements

Course	Title	Credits
ED 502	Teacher As Change Agent (Core 1)	3
ED 503	Teacher as Researcher (Core 2)	3
ED 504	Leading Change in America's Schools (Core 3)	3
ED 593	Seminar	2
or ED 581	Practicum & Seminar in Education	

Total Credits 11

Component 2: Pedagogy Requirements (choose 3 hours from each category, 9 hours total)

CSU Pueblo recognizes that *master* teachers demonstrate expertise in understanding and applying current best practices in each of the following areas: literacy education, instructional technology, and differentiation of instruction for all learners. All three were selected because recent research has indicated that application of best practices in these three areas will impact the quality of student achievement in K-12 classrooms. Teachers will select courses based on their development plan, with input from their graduate advisor. Courses cannot be double counted in concentration areas and the Pedagogy Core.

Instructional Technology

Graduate students may select from instructional technology courses offered by the University, with approval of their faculty advisors. Sample courses include:

Course	Title	Credits
Select 3 credits, samples include the following		
ED 520	Educational Media and Technology	3
ED 523	Teaching & Managing Technology	3

ED 529	Literacy & Technology	3
ED 531	Diverse Learners & Technology	3
ED 532	Hardware & Networking for Educators	3
ED 533	Instructional Theory & Tech Design	3
ED 534	Multimedia Design	3
ED 536	Technology & Assessment Tools	3
ED 570	The Technology Coordinator	3
ED 571	Distance Learning	3
ED 591	Special Topics	1-3

Total Credits 3

Differentiation of Instruction

Graduate students may select from any differentiation course, including the following:

Course	Title	Credits
Select 3 credits from any differentiation course, including the following:		
CLDE 503	Content Instruction for EL Learners	3
ED 512	Teaching Diverse Learners	3
ED 531	Diverse Learners & Technology	3

Total Credits 3

Literacy Education

Graduate students may select from any literacy course, including the following:

Course	Title	Credits
Select 3 credits from any literacy course, including the following:		
CLDE 520	Literacy for Eng Lang Learners	3
ED 529	Literacy & Technology	3
RDG 535	Advanced Disciplinary Literacy	3
RDG 550	Diagnosis & Remediation of Reading Problems	3

Total Credits 3

Component 3: Concentration Area Requirements (18 hours in one area)

The more deeply teachers grasp content, the more they tend to emphasize conceptual, problem solving, and inquiry aspects of their subjects. The less knowledgeable teachers are of the content they are teaching, the more they tend to emphasize facts and procedures. The purpose of Component 3 of the program is the development of teachers' content expertise related to their area of responsibility, with candidates choosing among a number of different K-12 concentration areas. Some areas require prerequisites, and an concentration area should be chosen with the advisement of their graduate advisor.

Course	Title	Credits
ED 574	Early Childhood Space Exploration	3
ED 575	Lunar/Mars Exploration	3
ED 576	Rocketry & Exploration	3
ED 577	Astronomy for the Classroom	3
ED 578	Long Term Space Travel	3
ED 579	Earth Systems Science	3

Total Credits 18

Additional courses with a Space Studies focus may be added with approval of the graduate advisor.