



Rider University

College of Liberal Arts and Science School of Education

SED-415/GLTP-507

Teaching Mathematics in Secondary Schools

Fall 2013

Mondays: 4:30 p.m. – 7:10 p.m.

Location: North Academic Building, Room 208

Dr. Carolyn Rosenberg, Adjunct Assistant Professor

Office: Memorial Hall, Room 218

Office Hours: Monday 2:30 p.m. - 4:00 p.m. or by appointment

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School of Education Mission

The School of Education prepares undergraduate and graduate candidates for professional careers in education, organizations, and agencies in the diverse American society. The School of Education fosters the intellectual, personal, and social development of each candidate for a changing world by creating and providing programs that embody the highest academic and professional standards. The School of Education promotes a climate of scholarly inquiry, high expectations for achievement, and best professional practices, while establishing beneficial relationships with the public and exchanging relevant ideas and services that speak to emerging needs.

Overview

The *Teaching Mathematics in Secondary Schools* course explores teaching mathematics at the secondary level through inquiry learning and supports the fundamental tenets of the National Council of Teachers of Mathematics (NCTM) Standards and the *Common Core State Standards*. Candidates incorporate current research and best practices, promote the creation of 21st century learning environments, design standards-based unit and lesson plans, examine performance assessment practices, include demonstration lessons followed by self- and peer-reflection, and analyze the selection and organization of instructional materials and content. Candidates demonstrate their skills in using graphing calculator technology, interactive dynamic software, concrete manipulatives, and virtual tools to explore mathematical ideas.

Rationale

The Rider University School of Education adopted a conceptual framework that is reflected in this course. A synopsis of the framework and the school's mission statement are attached to the syllabus. The framework expects the candidate to exhibit professional commitment, develop competency in both content knowledge (mathematics) and pedagogical knowledge (instructional strategies, assessment practices, and technology integration), engage in systemic reflection of one's professional practice, and become creative problem solvers in an environment that fosters experimentation and professional growth. The *Teaching Mathematics in Secondary Schools* course addresses the responsibilities general education teachers have in meeting the needs of special education students included in the secondary classroom.

Text and Technology

- **Text:** There is no assigned text. Candidates are expected to use the Rider University library, the Curriculum Resource Center (CRC), the Internet, the Science Learning Center, and other sources to locate applicable resources, such as journal articles and technology applications, to prepare for assignments and class work.
- **TaskStream:** All candidates in the teacher education program are required to purchase *TaskStream* accounts, which may be obtained at the Rider bookstore. The *TaskStream* account is a “textbook” for all education candidates during their tenure at the Rider University School of Education and is required for the completion of key assessments necessary for certification. Additional information regarding the purchase of TaskStream accounts may be accessed on the Rider University website.
- **Technology:**
 - Laptop computers or tablets with wireless Internet access should be brought to each class meeting for research, note taking, and explorations. The purchase of a computer or tablet is NOT required or expected.
 - TI-84+ graphing calculator or higher (preferred)*
 - *Geometer's Sketchpad Version 5.05* software license: Key Curriculum Press, ISBN: 9780076658657*

*Available for purchase in the Rider University bookstore or through the bookstore website (www.rider.bkstr.com)

SED-415/GLTP-507: Essential Questions and Goals

1. The candidate knows and models appropriate mathematics content and inquiry processes.

Essential Questions:

- 1.1 Can the candidate analyze and describe successful inquiry? (Apply mathematics principles/axioms and reasoning to problem solving situations.)
- 1.2 Can the candidate conduct mathematics inquiry?

- 1.3 Can the candidate locate and use appropriate content information to support reasoning?
- 1.4 Can the candidate engage in inquiry activities that examine the contributions of diverse cultures in the historical development of mathematical knowledge?

2. The candidate engages in the development of mathematics concepts and inquiry processes

Essential Questions:

- 2.1 Can the candidate engage in effective inquiry/discovery strategies?
- 2.2 Can the candidate successfully use instructional technology and dynamic software to support inquiry?

3. The candidate manages a productive learning environment

Essential Questions:

- 3.1 Can the candidate organize and facilitate a safe classroom/lab setting?
- 3.2 Can the candidate identify and account for learning differences in conducting instruction?
- 3.3 Can the candidate conduct appropriate verbal discourse?

4. The candidate successfully plans both daily and long-term instruction

Essential Questions:

- 4.1 Can the candidate design, organize, and implement appropriate and effective instruction that supports the teaching and learning of mathematics?
- 4.2 Can the candidate find and use applicable content, materials, resources, and technology?

5. The candidate professionally assesses achievement

Essential Questions:

- 5.1 Can the candidate design and use assessments to monitor and promote student achievement?
- 5.2 Can the candidate use data to make instructional decisions?
- 5.3 Can the candidate construct/select valid and reliable assessments?
- 5.4 Can the candidate evaluate student achievement using a variety of performance assessment tasks, scoring rubrics, and other traditional and non-traditional methods?
- 5.5 Can the candidate interpret and communicate standardized test results?

6. The candidate engages in self-reflection and professional growth endeavors

Essential Questions:

- 6.1 Can the candidate engage in productive self-reflection?
- 6.2 Can the candidate analyze and evaluate the mathematical thinking of peers and others?

6.3 Can the candidate effectively connect to professional organizations, the mathematics education community, and professional growth opportunities?

Evaluation

1. Assignments are included in this document and question-specific rubrics are posted on *Canvas* and *TaskStream*.
2. Assignments must be submitted electronically through *TaskStream* and a paper copy must be provided in class following the schedule included in the syllabus.
3. Assignments are scored using the following scale:
T = Target (2 points)
A = Acceptable (1 point)
U = Unacceptable (0 points)

Grading Scale

A	1.76 – 2.00
A-	1.51 – 1.75
B	1.26 – 1.50
B-	1.01 – 1.25
C	0.76 – 1.00
D	0.50 – 0.75
F	Less than 0.50

Assignment Summary

Assignment	Weight	Due Date*
1: Inquiry-Based Activities	1	September 23, 2013
2: Standards-Based Lesson Planning	1	October 7, 2013
3: Performance Assessment Task	1	October 14, 2013
4: Professional Meeting	1	October 28, 2013
5: Unit Plan	2	November 4, 2013
6: Math Lab	1	November 18, 2013
7: History of Mathematics	1	November 25, 2013
8: GLTP Project	1	November 25, 2013 (Approval: October 14, 2013)
9: Portfolio Project	1	December 4, 9, or 11, 2013 (By Appointment)

*** Submit assignments 1-7 electronically through *TaskStream* and provide Dr. Rosenberg with a paper copy of assignments 1-9 following the schedule published in the syllabus.**

Communication

The primary methods of communication are through the Rider University email accounts, *Canvas*, and *TaskStream*, which should be checked regularly.

Academic Integrity

In all written work, whether in class or out of class, the candidate's name on the work is considered to be a statement that the work is his or hers alone, except as otherwise indicated. Candidates are expected to provide proper citations for the statements and ideas of others using appropriate protocols (MLA or APA) whether submitted word-for-word or paraphrased.

Course Expectations

The following course expectations apply:

- **Attendance:**
Candidates are required to attend all class meetings and to report on time.
- **Assignments:**
Papers and projects are due on time.
- **GLTP Requirements**
GLTP candidates must prepare and additional project as described on page 12 of this syllabus.
- **Retention of Work Submitted:**
Electronic copies of all assignments in the School of Education should be retained for your electronic portfolio.
- **Cell Phones:**
Cell phones may not be used in class for any purpose unless specifically directed by the professor to support an instructional activity.

TEACHING MATHEMATICS IN SECONDARY SCHOOLS: SED-415/GLTP-507 Course Schedule: Fall 2013

Date	Topic
September 9, 2013	Topics: • Standards and Dispositions • Mathematics Fundamentals: Technology, Problem Solving, Discovery, Proof Essential Questions: • Can the candidate analyze and describe successful inquiry? • Can the candidate conduct mathematics inquiry? • Can the candidate locate and use appropriate content information to support reasoning? • Can the candidate locate and use appropriate instructional technology and dynamic software to support standards-based inquiry instruction? Due: • Assignment #1: Inquiry-Based Activities, September 23, 2013 • Complete <i>Geometer's Sketchpad</i> tutorials, September 30, 2013

Date	Topic
September 16, 2013	Topics: - Questioning Techniques - Differentiating Instruction - Homework Assignments Essential Questions: - Can the candidate identify and account for learning differences? - Can the candidate conduct appropriate verbal discourse? Due: - Assignment #1: Inquiry-Based Activities, September 23, 2013 - Complete <i>Geometer's Sketchpad</i> tutorials: September 30, 2013
September 23, 2013	Topics: - Sharing of Inquiry-Based Discovery Activities (Assignment #1) - Assessment, PARCC Essential Questions: - Can the candidate successfully engage in effective inquiry/discovery strategies? - Can the candidate design and use assessments to monitor and promote student achievement? - Can the candidate use data to make instructional decisions? - Can the candidate evaluate student achievement using a variety of performance assessment tasks, scoring rubrics, and other traditional and non-traditional methods? Due: - Assignment #2: Standards-Based Lesson Planning, October 7, 2013 - Complete <i>Geometer's Sketchpad</i> tutorials: September 30, 2013
September 30, 2013	Topics: - Mathematics Scoring Rubrics: Scoring Open-Ended Tasks - Standardized Tests: Interpreting Score Reports Essential Questions: - Can the candidate locate, model, and implement inquiry processes in the teaching and learning of mathematics? - Can the candidate construct/select valid and reliable assessments? - Can the candidate interpret and communicate standardized test results? Due: - Assignment #2: Standards-Based Lesson Planning, October 7, 2013 - Complete <i>Geometry Sketchpad</i> Tutorials - Assignment #3: Performance Assessment Task, October 14, 2013 - Assignment #8: GLTP Project Approval, October 14, 2013
October 7, 2013	Topics: - Self- and Peer-Reflection of Instructional Practice - Candidate Presentations of Calculator Activities Essential Questions: - Can the candidate engage in productive self-reflection? - Can the candidate analyze and evaluate the mathematical thinking of peers and others? Due: - Assignment #3: Performance Assessment Task, October 14, 2013 - Assignment #8: GLTP Project Approval, October 14, 2013
October 14, 2013	Topics: Unit Planning: (<i>Backward Design: UbD</i>, Wiggins and McTighe) Stage 1: Identifying Desired Results Stage 2: Determining Acceptable Evidence

Date	Topic
	- Candidate Presentation of Calculator Activities (continued) Essential Questions: - Can the candidate design, organize, and implement appropriate and effective standards-based instruction and assessment practices? - Can the candidate create 21st century learning environments that promote the teaching and learning of mathematics? Due: - Assignment #4: Professional Meeting, October 28, 2013
October 21, 2013	Topics: - Unit Planning: - Stage 3: Planning for Learning - Content and Strategies - Candidate Presentation of Calculator or <i>Geometer Sketchpad</i> Activities Essential Questions: - Can the candidate design, organize, and implement appropriate and effective standards-based instruction and assessment practices? - Can the candidate create 21st century learning environments that promote the teaching and learning of mathematics? Due: - Assignment #4: Professional Meeting, October 28, 2013
October 28, 2013	Topics: - Sharing of Math Meeting Experiences and Related Information - Candidate Presentation of <i>Geometer Sketchpad</i> Activities (continued) Essential Questions: - Can the candidate connect to professional organizations, the mathematics education community, and professional growth opportunities? - Can the candidate successfully use instructional technology and dynamic software to support inquiry? Due: - Assignment #5: Unit Plan, November 4, 2013
November 4, 2013	Topics: - Teaching Mathematics with Manipulatives - Candidate Presentation of <i>Geometer Sketchpad</i> Activities (continued) Essential Questions: - Can the candidate find and use appropriate materials? - Can the candidate analyze and evaluate the mathematical thinking of peers? Due: - Assignment #6: Math Lab, November 18, 2013
November 11, 2013	Topics: - Enriching Secondary Mathematics Instruction - Extracurricular Activities in Mathematics Essential Question: - Can the candidate find and use applicable content, materials, resources, and technology? Due: - Assignment #6: Math Lab, November 18, 2013
November 18, 2013	Topic: - Candidate Math Lab Activity Presentations Essential Questions: - Can the candidate organize and facilitate a safe classroom/lab setting? - Can the candidate analyze and evaluate the mathematical thinking of peers?

Date	Topic
	Due: - Assignment #7: History Paper, November 25, 2013 - Assignment #8: GLTP Project: November 25, 2013
November 25, 2013	Topics: - Web Quest Activities - Candidate Math Lab Activity Presentations (continued) Essential Questions: - Can the candidate create 21st century learning environments that support teaching and learning? - Can the candidate engage in inquiry activities that examine the contributions of diverse cultures in the historical development of mathematical knowledge? Due: - Individual Portfolio Conferences (December 4, 9, or 11, 2013 as assigned)
December 2, 2013	Topic: - Putting It All Together Essential Question: - Can the candidate design, organize, and implement appropriate and effective instruction that supports the teaching and learning of mathematics? Due: - Individual Portfolio Conferences (December 4, 9, or 11, 2013 as assigned)
December 4, 2013	Individual Portfolio Conferences
December 9, 2013	Individual Portfolio Conferences
December 11, 2013	Individual Portfolio Conferences

Note: This course schedule is subject to change at the discretion of the instructor.

Assignments

Assignments and learning experiences submitted by the candidate must directly relate to the *2010 Common Core State Standards for Mathematics* and/or the National Council of Teachers of Mathematics (NCTM) Standards for grades 9-12 and should reflect current research, best practices, technology integration, and authentic classroom situations. The following assignments are scored electronically on *TaskStream* using the following grading scale:

T = Target (2 points) A = Acceptable (1 point) U = Unacceptable (0 points)

Assignment #1: Mathematical Processes, Problem Solving, Inquiry, Proof, and Conjecture
Due: September 23, 2013
Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #1 to *TaskStream* under Assessment 8 by 7:00 a.m. on September 23, 2013 and provide Dr. Rosenberg with a paper copy in class.

Prepare a written report describing the essential elements and characteristics of mathematical inquiry, problem solving, reasoning, and methods of proof at the secondary level. Appropriate citations and specific resources should support the written description such as, but not limited to, the National Council of Teachers of Mathematics *Principles and Standards for School*

Mathematics, the *2010 Common Core State Standards for Mathematics*, and professional publications and journals.

Include a specific illustrative example of an inquiry-based activity in the written description that is appropriate for secondary mathematics instruction for each of the following content domains.

- | | |
|--|---|
| ☐ Number and Quantity | ☐ Geometry |
| ☐ Algebra | ☐ Statistics and Probability |
| ☐ Functions | |

Share and explain the inquiry-based activities orally with peers and faculty.

Assignment #2: Planning Discovery Lessons that Promote Mathematics Inquiry, Conceptual Understanding, and a Culture of Equity

Due: October 7, 2013

Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #2 to *TaskStream* under Assessment 8 by 7:00 a.m. on October 7, 2013 and provide Dr. Rosenberg with a paper copy in class.

Plan and present two standards-based mathematics lessons using the lesson plan template provided in class and posted on *Canvas*. The lesson plans must address attention to equity and accommodate all ability levels (including at-risk, gifted, ELL, and special education) in discovery activities that promote conceptual understanding of rigorous mathematics.

Graphing calculator technology must be used to explore algebraic ideas and representations of information and in solving problems in one of the lessons. The second lesson must use dynamic software to explore and represent fundamental concepts of calculus (i.e., *Geometer's Sketchpad* or *Mathematica*).

Both lessons will be taught to peers and faculty and should serve as examples of facilitating inquiry into significant fundamental concepts aligned with the National Council of Teachers of Mathematics *Principles and Standards for School Mathematics* and the *2010 Common Core State Standards for Mathematics*.

The Individual Education Plans (IEPs) of special education students in the assigned student teaching class (if known) should be used as the source for identifying the special needs, annual goals, and short-term objectives for identified special needs students. **It is essential to redact actual student names from any documents used to support your work.** Lesson plans should reflect modifications to accommodate identified special education students. Assessments must be developed to monitor achievement of each identified student's special education goals and objectives. (If a student teaching site has not been established, prepare lessons appropriate for a high school course in mathematics using mathematics materials and electronic and/or print resources and the sample IEP provided in class.)

Assignment #3: Implementing, Interpreting, and Using Formative and Summative Assessments

Due: October 14, 2013

Rubric: The question specific rubric identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #3 to *Task Stream* under Assessment 7 by 7:00 a.m. on October 14, 2013 and submit a paper copy in class.

Part A

Create a performance assessment task designed to help students explore **one** of the following secondary mathematics topics that aligns with the *Common Core State Standards for Mathematics*. A secondary mathematics topic not on the list may be used with prior approval from the instructor.

- Exponential Growth and Decay
- Equations and Inequality
- Quadratic Equations
- Trigonometry
- Geometric Measurement & Dimension
- Probability

The performance assessment task should include the following components: an overview of a realistic problem, a written description of the task (investigation or data to be collected), student research, a written summary of findings and conclusions, a culminating oral presentation, and any other relevant elements that enhance learners' experiences and expand their mathematics knowledge. Include the use of mathematics-specific technology.

Part B

Develop a four point scoring rubric for the performance assessment task in Part A. Include a four point rating scale that describes levels of performance as distinguished, proficient, basic, and unsatisfactory. Identify specific evaluation criteria that align with identified goals and objectives of the task. Be certain to measure how the performance assessment task demonstrates the learner's conceptual understanding and procedural proficiency of mathematics.

Part C

Prepare four sample student responses (exemplars/anchor papers) that illustrate each of the four performance levels in your rubric.

Part D

Describe the student achievement data you plan to collect from the Performance Assessment Task. Explain why you plan to use the performance assessment task formatively or summatively. How do you plan to interpret and use the findings to drive your instructional practice and to promote student growth? How will you address students who perform above or below proficient levels on the performance assessment task?

Assignment #4: Promoting Positive Dispositions Toward Mathematical Processes, Thinking, and Learning Through Professional Growth and Instructional Practice

Due: October 28, 2013

Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #4 to *TaskStream* under Assessment 7 by 7:00 a.m. on October 28, 2013 and provide Dr. Rosenberg with a paper copy in class.

Attend a professional meeting pertaining to the teaching and learning of mathematics at the secondary level (e.g., AMTNJ/NCTM seminar/conference, webinar, in-service program, or Rider Science Center program). Write a reflection on the useful ideas and instructional practices presented and demonstrate how you will incorporate the mathematics teaching strategies in your instructional practice. Share useful information and key conference ideas with peers.

Assignment #5: Knowledge of Mathematical Pedagogy and Instructional Practice Through Unit Design

Due: November 4, 2013

Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #5 to *TaskStream* under Assessment 3 by 7:00 a.m. on November 4, 2013 and provide Dr. Rosenberg with a paper copy in class.

Create a unit plan and three complete consecutive (sequential) lesson plans appropriate for implementation in teaching high school mathematics using the unit and lesson plan templates provided in class and posted on *Canvas*. Culminating summative assessment evidence should directly relate to the attainment of unit objectives and fundamental understandings using performance-based assessment strategies and techniques. If more than three lessons are required to attain the goals and fundamental understandings of the unit plan, provide a brief description of additional instructional objectives and content domain standards needed to complete the unit plan.

Present an overview of the unit plan and present one of the supporting lessons to peers and faculty.

Candidates will provide constructive feedback on each class presentation using the observation rubric previously developed in Assignment 3.

Assignment #6: Knowledge of Concrete, Hands-On Strategies that Meet the Needs of All Learners and Promote Conceptual Development of Mathematical Principles

Due: November 18, 2013

Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #6 to *TaskStream* under Assessment 5 by 7:00 a.m. on November 18, 2013 and provide Dr. Rosenberg with a paper copy in class.

Create and present two (2) standards-based mathematics hands-on lab activities. One of the activities should focus on the use of construction supplies, manipulative materials, and electronic tools in a discovery activity in algebra. The second activity, or series of activities, must use concrete models, drawings, and dynamic geometric software (*Geometer's Sketchpad*) to explore geometric ideas and their applications in real-world contexts.

Assignment #7: Knowledge of the Historical Development of Mathematical Content and Perspectives
Due: November 25, 2013
Rubric: The question specific rubric posted on *Canvas* and *TaskStream* identifies expectations for quality work and should be read carefully prior to beginning the task.

Upload Assignment #7 to *TaskStream* under Assessment 6 by 7:00 a.m. on November 25, 2013 and provide Dr. Rosenberg with a paper copy in class.

Prepare a paper that demonstrates knowledge of the following:

- The historical development of algebra, including contributions from diverse cultures.
- The historical development of Euclidean and non-Euclidean geometries, including the contributions of diverse cultures.

Provide specific examples and citations from the literature to support your work.

Assignment #8: GLTP Candidates Only
Project Approval: October 14, 2013
Due: November 25, 2013

Graduate-Level Teacher Preparation (GLTP-507) candidates will also prepare a project/paper on a subject to be determined by agreement of the candidate and Dr. Rosenberg. The project/paper will explore a topic of particular interest to the candidate and that is related to the instructional objectives of this course. The assignment should include a bibliography and conclusions grounded in research.

Assignment #9: Final Portfolio Project
Individual Conferences as Scheduled

Develop a portfolio that reflects upon the ideas developed in the *Teaching Mathematics in Secondary Schools* course. Introduce the portfolio with a one-page description of your educational philosophy about teaching mathematics at the high school level. Include a written reflection and provide specific evidence that demonstrates your understanding of the essential questions and goals identified in the syllabus. The portfolio may be organized in a binder or in an electronic format. Present and defend the portfolio at an individual meeting with the professor following the schedule provided in class.

Professional Standards

There are **four** (4) sets of standards that generate the big ideas related to *Teaching Mathematics in Secondary Schools*: **NCTM** (National Council of Teachers of Mathematics), **INTASC** (Interstate New Teacher Assessment and Support Consortium), **NJPST** (New Jersey Professional Teaching Standards for Teachers, and **CCSS** (*2010 Common Core State Standards*). Note the similarities across the set of standards. The NCTM and CCSS standards are more specifically related to the teaching of mathematics and are, therefore, the basis of the course objectives.

National Council of Teachers of Mathematics (NCTM) Standards

<http://www.nctm.org>

1. **Knowledge of Mathematical Problem Solving:** Candidates know, understand, and apply the processes of mathematical problem solving
2. **Knowledge of Reasoning and Proof:** Candidates reason, construct and evaluate mathematical arguments, and develop an appreciation for mathematical rigor and inquiry
3. **Knowledge of Mathematical Communication:** Candidates communicate their mathematical thinking coherently and clearly to peers, faculty, and others
4. **Knowledge of Mathematical Connections:** Candidates recognize, use, and make connections between and among mathematical ideas, academic disciplines, and real-world contexts to build meaning of mathematical principles
5. **Knowledge of Technology:** Candidates apply knowledge of mathematics to select and use appropriate technological tools, such as, but not limited to, spreadsheets, interactive graphing tools, computer algebra systems, dynamic statistical applications, web quest activities, graphing calculators, data collection devices (scientific probes), and/or presentation software
6. **Knowledge of Mathematical Dispositions:** Candidates support and model positive attitudes toward mathematical processes and learning
7. **Knowledge of Mathematical Pedagogy:** Candidates possess a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning

Interstate New Teacher Assessment and Support Consortium (INTASC)

http://www.ccsso.org/Documents/2011/InTASC_Model_Core_Teaching_Standards_2011.pdf

1. **Content Pedagogy:** The teacher understands the central concepts, tools of inquiry, and structures of the discipline he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
2. **Student Development:** The teacher understands how children learn and develop, and can provide learning opportunities that support a child's intellectual, social, and personal development.
3. **Diverse Learners:** The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
4. **Multiple Instructional Strategies:** The teacher understands and uses a variety of instructional strategies to encourage student development of critical thinking, problem solving, and performance skills.
5. **Motivation and Management:** The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
6. **Communication and Technology:** The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
7. **Planning:** The teacher plans instruction based on the knowledge of subject matter, students, content, the community, and curriculum goals.
8. **Assessment:** The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

9. **Reflective Practice/Professional Development:** The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others and who actively seeks out opportunities to grow professionally.
10. **School and Community Involvement:** The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
11. **Develops Thinking and Problem-solving Skills:** Standard added by Rider University Faculty

New Jersey Professional Standards for Teachers (NJPST)

<http://www.state.nj.us/education/profdev>

1. **Subject Matter Knowledge:** Teachers shall understand the central concepts, tools of inquiry, structures of the discipline, especially as they relate to the *2010 New Jersey Core Curriculum Content Standards*, and design developmentally appropriate learning experiences making subject matter accessible and meaningful to students.
2. **Human Growth and Development:** Teachers shall understand how children and adolescents learn in a variety of school, family, and community contexts and provide opportunities that support their intellectual, social, emotional, and physical development.
3. **Diverse Learners:** Teachers shall understand the practice of culturally responsive teaching
4. **Instructional Planning and Strategies:** Teachers shall understand instructional planning, design long- and short- term plans based upon knowledge of subject matter, students, community, and curriculum goals, and shall employ a variety of developmentally appropriate strategies in order to promote critical thinking, problem solving, and the performance skills of all learners.
5. **Assessment:** Teachers shall understand and use multiple assessment strategies and interpret results to evaluate and promote student learning and to modify instruction in order to foster the continuous development of students.
6. **Learning Environment:** Teachers shall understand individual and group motivation and behavior and shall create a supportive, safe, and respectful learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
7. **Special Needs:** Teachers shall adapt and modify instruction to accommodate the special learning needs of all students.
8. **Communication:** Teachers shall use knowledge of effective verbal, nonverbal, and written communication techniques and the tools of information literacy to foster the use of inquiry, collaboration, and supportive interactions.
9. **Collaboration and Partnerships:** Teachers shall build relationships with parents, guardians, families, and agencies in the larger community to support students' learning and well being.
10. **Professional Development:** Teachers shall participate as active, responsive members of the professional community, engaging in a wide range of reflective practices, pursuing opportunities to grow professionally and establishing collegial relationships to enhance the teaching and learning process

2010 Common Core State Standards (CCSS): Mathematical Practices

<http://www.state.nj.us/education/cccs/>

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

**THE RIDER UNIVERSITY SCHOOL OF EDUCATION
MISSION STATEMENT**

The School of Education prepares undergraduate and graduate students for professional careers in education, organizations, and agencies in the diverse American society.

The School of Education fosters the intellectual, personal, and social development of each student for a changing world by creating and providing programs that embody the highest academic and professional standards.

The School of Education develops students who are committed, knowledgeable, and reflective and who value service, ethical behavior and the improvement of one's self and profession.

The School of Education promotes a climate of scholarly inquiry, high expectations for achievement, and best professional practices, while establishing beneficial relationships with the public and exchanging relevant ideas and services that speak to emerging needs.

NCATE

**The Standard of Excellence
in Teacher Preparation**



RIDER
UNIVERSITY

School of Education

CONCEPTUAL FRAMEWORK

KNOWLEDGEABLE

The School of Education emphasizes content and pedagogical knowledge, which candidates implement in supervised classroom and field experiences. Candidates use acquired technological expertise and reference relevant standards for planning and reflecting on their classroom work.

PROFESSIONAL

Novice and experienced educators enrolled in the School of Education are on a career-long path toward professionalism that does not end with graduation. We encourage candidates to become thoughtful, creative problem-solvers.

REFLECTIVE

The School of Education defines reflection as the process of thinking clearly and deliberately to promote understanding about professional practice. Reflection, grounded in active experience, has value for developing educators through classroom observation, self-assessment, and journal writing.

COMMITTED

Commitment, highly prized by the School of Education, serves as an essential cornerstone for teaching and learning. Commitment is a set of connected attitudes, values, and beliefs that result in professional behaviors expected of dedicated educators.

WWW.RIDER.EDU/EDUCATION