

Fresno Pacific University  
Center for Professional Development

### Course Syllabus

**MAT 900A - Math Activities for the Primary Grades** (Online course)

Instructors: Mary Bennett, MA

### Contact Information

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### Procedure

Carefully read the entire syllabus and all of the course requirements.

If, after examining the course requirements, you decide that this course is inappropriate for your needs, notify the course instructor via email, and return the materials with the signed and completed *Procedure for Completing Coursework* for a refund.

A full refund for tuition and instructional materials, less a \$20 handling fee, will be granted to the student if the course is dropped within the first four weeks after registration. After this time, refunds will be pro-rated as per institutional policy. If a student does not officially withdraw, a **No Credit grade shall be issued by the instructor no later than one year after registration.**

### How to send Email

The subject line of all Email **must** contain the following information:

course number your last name, first initial.

example: MAT 900 Bennett, M.

Email sent without this subject line will **not** be opened.

### Number of Units

Three semester units - 15 hours per credit

Units are graduate level, professional development units primarily used for professional advancement and are accredited through Fresno Pacific University.

### Grading Options

Course assignments are graded with the use of a Scoring Rubric. Course participants have the option of requesting a letter grade or a credit/no credit. If you would like a letter grade, please check the appropriate box on the *Grade Form* and the *Procedure for Completing Coursework*.

### Course Dates

Self-paced; students may enroll at any time and take up to one year to complete assignments.

You have up to one year from the date of registration, and no less than three weeks (one week per credit), to complete the course.

### Course Extensions

Students may request an extension for up to six months from the Director of Independent Studies prior to the

original due date. A letter or an Extension Request Form must be submitted to the Director of Independent Studies prior to the original due date, accompanied by a \$20 handling fee.

[http://fpu.edu/admissions/professional\\_development/general\\_information.asp#extensions](http://fpu.edu/admissions/professional_development/general_information.asp#extensions)

Grades will not be released until all tuition and fees have been paid.

If students do not complete course requirements within the six-month extension period, a grade of No Credit will automatically be issued.

**Do not request an extension from the course instructor.**

### **Course Completion**

In addition to the completed coursework, the following forms need to be completed, and **mailed** back to the instructor.

Three-part Grade Form (you will need three copies of this form)

Procedure for Completing Coursework

Assignment Checklist

Once this information is received, a grade will be forwarded to the School of Professional Studies at Fresno Pacific University and you will be notified via email.

### **Official Grade Reports and Transcript Information**

#### **Before you order transcripts:**

1. **Finish** the course. Be sure to return the completed 3-part Grade Form to the instructor.
2. **Wait** for the official, blue computer-generated Grade Report to be mailed to you from Fresno Pacific University.
3. **After** you receive your official, blue computer-generated Grade Report, go to [www.fresno.edu/registrar](http://www.fresno.edu/registrar) for information and the official transcript request form or call 559-453-2268 for details.

### **Policy on Plagiarism**

All people participating in the educational process at this university are expected to pursue honesty and integrity in all aspects of their academic work. Academic dishonesty, including plagiarism, will be handled according to the procedures set forth in the university catalog.

### **Course Description**

*Math Activities for the Primary Grades* is designed for first through third grade teachers. This course integrates theory and practice, using innovative teaching strategies. Teachers will engage their students in hands-on activities that build mathematical knowledge and demonstrate proficiency. The learning experiences are easily adaptable to meet the various learning styles and needs as well as prepare students for achievement testing. Course participants will also have the chance to interact with the instructor and their classmates in the online environment as they complete assignments. The concept and skill areas presented in this course are aligned with national, state, and local guidelines. In addition, the lessons are easily integrated into existing mathematics programs.

### **Primary Learning Outcomes**

Students completing this course will:

- Examine state or national standards in the area of mathematics and align those standards with selected activities.
- Engage classroom students in appropriate learning activities that demonstrate mastery or progression towards meeting the standards and describe each experience through reflective writing.
- Create an environment in which teachers and students work as active learners and students are encouraged to communicate knowledge through the use of appropriate activities which are described through reflective writing.
- Develop research-based and standards-based instructional activities that meet the needs of a diverse student population.
- Promote staff interaction through observation and sharing and describe the reaction of colleagues through reflective writing.
- Identify and analyze teaching strategies used in mathematics education and make pedagogical connections to current trends and the course content.
- Assess and reflect upon teaching practices and the classroom environment in relation to the course content by responding to focus questions.

### **National Standards**

The activities in the course manual, *Math Activities for the Primary Grades*, focus on the standards at the core of a solid mathematics instructional program for primary students as published in the by the National Council of Teachers of Mathematics in the *Principles and Standards for School Mathematics* <http://standards.nctm.org/>.

### **Number and Operations Standard**

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

In addition, the activities in the course manual concentrate on the understanding of patterns, measurement, and data and their relationship to numbers, which are reflected in the following standards:

#### **Algebra**

Understand patterns, relations, and functions

#### **Measurement Standard**

Understand measurable attributes of objects and the units, systems, and processes of measurement

#### **Data Analysis and Probability Standard**

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them

Furthermore, as students engage in activities from the course manual they will explore patterns, focus on problem solving process, and investigate realistic applications which align with the **Process Standards** of *Problem Solving, Reasoning and Proof, Communication, Connections, and Representation*.

Course participants will be required to explore district, state, or national standards in greater detail as they progress through the course and align the course content to the standards specific to their grade level.

## **National Board for Professional Teaching Standards**

In an effort to enhance the learning experiences, as well as demonstrate knowledge, skills, abilities, and commitment, teachers will infuse the five core propositions set forth by **The National Board for Professional Teaching Standards** in their teaching practices. This will be accomplished as teachers successfully implement appropriate activities in their classroom and reflect upon the experience. In addition, teachers will be networking with their colleagues as part of a learning community.

<http://www.nbpts.org/>

- Teachers are committed to students and their learning.
- Teachers know the subjects they teach and how to teach those subjects to students.
- Teachers are responsible for managing and monitoring student learning.
- Teachers think systematically about their practice and learn from experience.
- Teachers are members of learning communities.

## **Course Materials**

- **Math Activities for the Primary Grades** by Curriculum Services Associates is a collection of 30 math activities appropriate for use in the primary grades.
- Relevant online resources that support course content and encourage further investigation.
- **Chip Pack** that includes pawns, spinners, and markers for use with the activities.

## **Course Requirements**

1. Required contacts with the course instructor.
2. Implement appropriate standard-based activities in the classroom.
- 3.
4. Participate in all discussion forums and post responses that reflect critical thinking and demonstrate positive online interaction techniques.

## **Schedule of Topics and Assignments**

### **Credit or Letter Grade of "B"**

#### **Standards-Based Instruction**

- Locate and explore relevant mathematics standards.
- Reflect upon how standards guide teaching practices.

#### **Learning Activities**

- Identify 15 activities in the course content appropriate for the level of the students in your classroom.
- Align each of the activities to national, state, or district standards.
- Implement the activities and complete a reflection for each one assessing the results.

#### **Integrated Math Activity**

- Develop one activity for use with students in your classroom that infuses math with another subject area.

#### **Teacher Collaboration**

- Promote staff interaction and collaboration through the sharing of ideas and relevant teaching practices.

#### **Article Review**

- Review and critique current trends in mathematics education specifically related to your teaching situation.

## Reflective Essay

- Analyze the learning environment within your classroom following the use of the activities.

## Letter Grade of "A"

### Activity Creation and Development

- Explore the researched-based instructional strategies.
- Develop a standards-based math activity using a research-based instructional strategy appropriate for the students in your classroom.

## Alternate Assignment

An alternate assignment is available for teachers who are not currently teaching or want to finish the course requirements during the summer.

## Evidence of Learning

- Course instructor observed evidence of understanding of course objectives as demonstrated through students' reflective writing assignments.
- Course instructor observed evidence of understanding of course objectives as demonstrated through students' correlation of the activities to state, national, or district standards.
- Student demonstrated their understanding of appropriate methods of teaching mathematics through the implementation of lessons in their classroom.
- Student demonstrated their understanding of integrating other subject areas into the teaching of mathematics through the suggestions and modifications described in each reflection.
- Student demonstrated their understanding of research-based instructional strategies through the design of an appropriate mathematics activity.
- Student demonstrated their understanding of the value of peer collaboration through their reflection of a sharing experience.
- Student demonstrated the use of critical thinking as they connected real-life classroom situations to the course content demonstrated through reflective writing.
- Student demonstrated reflective teaching practices through connections to course assignments and primary learning outcomes as described in a reflective essay.

## Grading Policies

- 100 total points possible  
100 – 90 = A  
89 – 70 = B or Credit Grade  
Below 70 points = no credit
- The discernment between an A or a B is at the discretion of the instructor based on the quality of work submitted.
- Coursework falling short of a quality equaling a B or a Credit Grade will be returned with further instructions.
- All assignments must be completed in order to receive a grade. In addition, all assignments are expected to reflect the quality that teacher-training institutions require of professional educators. If completed assignments do not meet this standard, students will be notified with further instructions from the instructor.
- Writing Requirements  
**Superior:** Writing is clear, succinct, and reflects graduate level expectations.

**Standard:** Writing is acceptable with very few mistakes in grammar and spelling.

**Sub-standard:** Writing contains noticeable mistakes in grammar and spelling.

Graduate level course work reflects Fresno Pacific University's Desired Student Learning Outcomes as it applies to professional development to demonstrate the following:

- Oral and written communication in individual and group settings
- Content knowledge, and application of such knowledge in the student's area of interest to affect change
- Reflection for personal and professional growth
- Critical thinking
- Cultural and global perspectives to understand complex systems
- Computational/methodological skills to understand and expand disciplines, including an understanding of technological systems

### **Rubric for Evaluating Assignments**

#### **Assignments**

Learning Activities and Standards Correlation

30 possible points

#### **Sub-Standard**

15 activities were implemented, standards were correlated to less than 10 of the activities, objectives were missing or vague, reflections contained a minimal description of the grouping, procedures, and few or no observations, suggestions, modification and subject integration, or student reactions were explained.

#### **Standard**

15 activities were implemented, standards were correlated to most of the activities, the objectives were adequately stated but not always specific, reflections were generally clear but did not always comprehensively describe the groupings, and procedures, very few suggestions, modifications and subject integration, observations, or student reactions were included.

#### **Superior**

15 or more activities were implemented, standards were correlated to all activities, objectives were specific and stated in terms of observable learner outcomes, reflections were comprehensive and included observations of what went well or problems encountered, there was a clear and concise description of the groupings, the procedure, and suggestions, modifications, appropriate subject integration, and student reactions were explained when appropriate.

#### **Points**

#### **Assignments**

Activity Development

10 possible points

#### **Sub-Standard**

Vague description of the activity is defined, activity somewhat infuses another subject area and is vaguely linked to a skill and objective, target audience and researched-based instructional strategy, learning materials and a description of the processes, procedures and an analysis of the activity unclear, activity is not easily accessible through the appropriate Discussion Board.

#### **Standard**

Clear, and detailed description of the activity is defined, activity is infused with another subject area and the skill and objective, target audience and research-based instructional strategies are presented, learning materials and

a description of the processes, procedures and an analysis of the activity is defined, activity is accessible through the appropriate Discussion Board.

**Superior**

Comprehensive, clear, and detailed description of the activity is defined, activity is clearly infused with another subject area and linked to a specific skill, objective, target audience and research-based instructional strategies are presented, learning materials and a description of the processes, procedures and an analysis of the activity is thoroughly defined, activity is easily accessible through the appropriate Discussion Board.

**Points**

**Assignments**

Teacher Collaboration

10 possible points

**Sub-Standard**

Two activities were shared, summary is vague and lacks a detailed description of the experience, few or no comments or suggestions from the teachers were included, it is not clear as to whether or not the teachers found the activities valuable.

**Standard**

Two activities were shared, there is an adequate description of the experience, comments from the teachers as well as suggestions for adaptations or modifications in the activities were minimally presented, it is vague as to whether or not the teachers found the activities valuable.

**Superior**

Two or more activities were shared, summary is comprehensive, concise and a detailed description of the experience is clearly presented, comments from the teachers were included as well as suggestions for adaptations or modifications in the activities, it is clear as to whether or not the teachers found the activities valuable.

**Points**

**Assignments**

Article Review

10 possible points

**Sub-Standard**

The topic of the article is marginally appropriate to the content of the course and the teaching situation, critique is vague and disjointed, few or no examples are provided for classroom application.

**Standard**

The topic of the article adequately applies to the content of the course and the teaching situation, critique is generally well organized, few examples are provided for classroom application.

**Superior**

The topic of the article is highly appropriate to the content of the course and the teaching situation, critique is comprehensive and very well organized, specific examples are provided for classroom application.

**Points**

**Assignments**

Reflective Essay

10 possible points

**Sub-Standard**

Reflection is vague in relation to the strategies presented in the course, lacks a description of the classroom environment, with little or no indication of student participation or plans for future implementation and there is not a connection between course assignments and primary learning outcomes.

**Standard**

Reflection is specific to strategies presented in the course, there is adequate description of the classroom en-

vironment, student reaction, as well as plans for future implementation and a connection between the course assignments and the primary learning outcomes is presented.

**Superior**

Reflection displays critical thinking that is clear, concise, and specific to the strategies presented in the course, a comprehensive description of the classroom environment, the reaction of the students, and plans for future implementation are included, a clear connection between the course assignments and the primary learning outcomes is presented.

**Points**

**Assignments**

Research-Based Instructional Activity

10 possible points

**Sub-Standard**

Vague description of the activity is defined, activity is somewhat linked to a skill, objective, and research-based instructional strategy, target audience, learning materials and a description of the processes, procedures and an analysis of the activity is unclear.

**Standard**

Clear, and detailed description of the instructional activity is defined, activity is linked to a skill, objective, and research-based instructional activity, target audience, learning materials and a description of the processes, procedures and an analysis of the activity is presented.

**Superior**

Comprehensive, clear, and detailed description of the instructional activity is defined, activity is clearly linked to a specific skill, objective, and research-based instructional activity, target audience, learning materials and a description of the processes, procedures and an analysis of the activity is thoroughly presented.

**Points**

**References**

Marzano, R., Pickering, D., Pollock, J. 2001. *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*. Association for Supervision and Curriculum Development.

McRel Mid-continent Research for Education and Learning

A compendium of content standards and benchmarks for K-12 education

Education World National and State Standards

Academic Benchmarks