




INSTRUCTOR SURVEY, FALL 2006

This survey is designed to ask you questions about the undergraduate mathematics course for pre-service elementary teachers, which will be referred to as “the mathematics class.” In answering the questions, please consider the class you are currently teaching. If you are currently teaching more than one mathematics course, consider the class that students usually take first (i.e., the class that comes first in a sequence). If you taught the class in the past but are not currently teaching the class, please consider the last time you taught this class (i.e., a class that is taught in the spring semester).

SECTION I: ORGANIZATION OF COURSE

This section asks about the organization and structure of your mathematics course, as well as information about the students in your course.


1a. Are you currently teaching more than one mathematics course, or, did you teach more than one mathematics course last semester? *(Circle one)*

- a. Yes
 b. No
- 

1b. If yes, are/were these courses separate mathematics courses or multiple sections of the same course? *(Circle one)*

- a. I am teaching/taught separate mathematics courses (i.e., MATH 201, MATH 301)
 b. I am teaching/taught more than one section of the same mathematics courses (i.e., MATH 201, section 1 and 2)

2a. Are there multiple sections of your mathematics course that are taught by other instructors? *(Circle one)*

- a. Yes
 b. No
- 

2b. If yes, about how often do/did you have meetings during the term with other instructors of your mathematics course to discuss and plan curriculum or teaching approaches? *(Circle one)*

- a. Never
 b. Once during the term
 c. 2-3 times a term
 d. Monthly
 e. Biweekly
 f. Weekly
 g. More often than weekly

3. How many students are/were enrolled in your mathematics class?

_____ Students

4. How many hours did you teach the class per week?

Do not include preparation time.

_____ Hours per week

5. **How much control do you have over your mathematics course in the following areas?** Circle the number to indicate your control over your mathematics course. The scale of responses ranges from “No control” (1) to “Complete control” (4).

	No control	Limited control	Moderate control	Complete control
a. Course content/topics to be covered in course	1	2	3	4
b. Selecting the sequence in which topics are covered	1	2	3	4
c. Organization of course	1	2	3	4
d. Specific textbooks/materials to be used	1	2	3	4
e. Writing the syllabus	1	2	3	4
f. Deciding on methods by which to assess students	1	2	3	4
g. Determining content of student assessments	1	2	3	4
h. Deciding how much weight to give to various forms of assessment	1	2	3	4

6. **How familiar are you with each of the following documents?** Circle the number to indicate your familiarity. The scale of responses ranges from “Not familiar” (1) to “Very familiar” (3). If no document exists in your college or university, circle “Not applicable.”

	Not familiar	Fairly familiar	Very familiar	Not applicable
a. National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics	1	2	3	NA
b. Praxis I: Pre-Professional Skills Assessment	1	2	3	NA
c. Praxis II: Principles of Learning and Teaching, Subject Assessments, Teaching Foundations: Mathematics	1	2	3	NA
d. Departmental curriculum guide	1	2	3	NA
e. Departmental syllabus for this mathematics course	1	2	3	NA
f. State curriculum guide for K-8 mathematics	1	2	3	NA
g. State pedagogy guide for K-8 mathematics	1	2	3	NA
h. Adding It Up: Helping Children Learn Mathematics	1	2	3	NA

7. **In which department is/was this mathematics course taught?** (Circle one)

- a. Education
- b. Mathematics
- c. Mathematics Education
- d. Other (Please specify: _____)

8. **With what department are you affiliated in your college or university?** (Circle one)

- a. Education
- b. Mathematics
- c. Mathematics Education
- d. Other (Please specify: _____)

9. How closely do/did you work with faculty from the school or department of education in your college or university for each of the following activities? Circle the number that best fits your opinion. The scale of responses ranges from “No collaboration at all” (1) to “A great deal of collaboration” (4).

	No collaboration at all	Limited collaboration	Moderate collaboration	A great deal of collaboration
a. Plan the content of this specific mathematics course	1	2	3	4
b. Design overall curriculum for prospective elementary teachers	1	2	3	4
c. Co-teach a mathematics or education course	1	2	3	4
d. Coordinate methods and content courses	1	2	3	4
e. Collaborate on research	1	2	3	4

10. How closely do/did you work with faculty from the department of mathematics in your college or university for each of the following activities? Circle the number that best fits your opinion. The scale of responses ranges from “No collaboration at all” (1) to “A great deal of collaboration” (4).

	No collaboration at all	Limited collaboration	Moderate collaboration	A great deal of collaboration
a. Plan the content of this specific mathematics course	1	2	3	4
b. Design overall curriculum for prospective elementary teachers	1	2	3	4
c. Co-teach a mathematics or education course	1	2	3	4
d. Coordinate methods and content courses	1	2	3	4
e. Collaborate on research	1	2	3	4

11. How familiar are you with the curriculum for prospective elementary teachers in the school or department of education?

- Not familiar
- Fairly familiar
- Very familiar

12. How familiar are you with the requirements for an elementary teacher credential in your state?

- Not familiar
- Fairly familiar
- Very familiar

13. What percentage of the students in your mathematics course is in or intends to enter an elementary teacher certification program?

- 0-25%
- 26-50%
- 51-75%
- 76-100%
- I don't know

14. Based on what you know about your students, approximately what percentage of the students in your mathematics course do you think had higher level math, such as trigonometry or calculus, in their high school education?

If you are not sure, please give your best estimate.

- a. 0-25%
- b. 26-50%
- c. 51-75%
- d. 76-100%

15. On what type of knowledge did you base your answer to question 15 above?

- a. Data collected about my class (i.e., a survey of your class, departmental statistics on student background)
- b. Estimate based on my experience teaching the class
- c. Other _____

16. Based on what you know about your students, approximately what percentage of the students in your mathematics course have taken or will take high level mathematics courses in college?

If you are not sure, please give your best estimate.

- a. 0-25%
- b. 26-50%
- c. 51-75%
- d. 76-100%

17. On what type of knowledge did you base your answer to question 17 above?

- a. Data collected about my class (i.e., a survey of your class, departmental statistics on student background)
- b. Estimate based on my experience teaching the class
- c. Other _____

SECTION II: ATTITUDES ABOUT TEACHING MATHEMATICS

This section asks about your beliefs and attitudes about teaching elementary school mathematics, as well as about teaching your mathematics course.

18. How much do you agree with the following statements about teaching your mathematics course? Please circle a number which describes your opinion the best. The scale of responses ranges from “Strongly agree” (1) to “Strongly disagree” (5).

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
a. Math is primarily a formal way to represent the real world.	1	2	3	4	5
b. Some students have a natural talent for mathematics and others do not.	1	2	3	4	5
c. Mathematics is useful for solving everyday problems.	1	2	3	4	5
d. This class is about teaching students to understand more deeply things they already know.	1	2	3	4	5
e. More than one representation should be used in teaching a mathematical concept.	1	2	3	4	5
f. It is important for students to remember formulas and procedures to be good at mathematics in this class.	1	2	3	4	5
g. Mathematics problems can be done correctly in only one way.	1	2	3	4	5
h. In this class, it is important to make explicit to students the role of definitions in mathematics.	1	2	3	4	5
i. It is important for students to think creatively to be good at mathematics in this class.	1	2	3	4	5
j. It is important for students to understand how mathematics is used in the real world to be good at mathematics in this class.	1	2	3	4	5
k. It is important for students to be able to provide reasons to support their solutions to be good at mathematics in this class.	1	2	3	4	5
l. A prospective elementary teacher only needs to know the mathematics covered in the elementary grades.	1	2	3	4	5
m. My goal for this class is to help students routinize their understanding of elementary mathematics.	1	2	3	4	5
n. Hallmarks of mathematics are clarity, precision, and unambiguousness	1	2	3	4	5
o. All prospective elementary teachers benefit from taking calculus or other higher level mathematics.	1	2	3	4	5
p. In this class, one of my goals is to teach students what a mathematical proof is.	1	2	3	4	5
q. In mathematics you can be creative	1	2	3	4	5
r. Most of my students already know how to do the mathematics covered in this course.	1	2	3	4	5
s. A mathematics course for prospective elementary teachers should show them how to teach elementary students.	1	2	3	4	5
t. A mathematics course for prospective elementary teachers should help teachers learn to love mathematics.	1	2	3	4	5
u. A good mathematics course for prospective elementary teachers should be taught the same way as a good mathematics course for elementary students.	1	2	3	4	5

SECTION III: INSTRUCTIONAL PRACTICES

This section asks about activities and practices that you use when teaching your mathematics class.

19. In your mathematics course, how often do/did students do each of the following activities? Please circle a number which describes your course best. The scale of responses ranges from “Never or almost never” (1) to “Every lesson” (4).

	Never or almost never	Some lessons	Most lessons	Every lesson
a. Explain the reasoning behind an idea	1	2	3	4
b. Work on problems for which there is no immediate method of solution	1	2	3	4
c. Use computers to solve exercises or problems	1	2	3	4
d. Write equations to represent relationships	1	2	3	4
e. Practice computational skills	1	2	3	4
f. Use graphing calculators to solve exercises or problems	1	2	3	4
g. Listen to you explain terms, definitions, or mathematical ideas	1	2	3	4
h. Listen to you explain computational procedures or methods	1	2	3	4
i. Analyze similarities and differences among several representations, solutions, or methods	1	2	3	4
j. Prove that a solution is valid or that a method works for all similar cases	1	2	3	4
k. Work on mathematical communication and/or representation	1	2	3	4
l. Work individually on mathematics problems from the textbook/workbook	1	2	3	4
m. Make conjectures and explore possible methods to solve a mathematical problem	1	2	3	4
n. Discuss different ways that they solve particular problems	1	2	3	4
o. Work in small groups on mathematics problems	1	2	3	4
p. Work on individual projects that take several days	1	2	3	4
q. Work on group investigations that extend for several days	1	2	3	4
r. Write about how to solve a problem in assignment or test	1	2	3	4
s. Do problems that have more than one correct solution	1	2	3	4
t. Use manipulatives such as base 10 blocks and fraction bars	1	2	3	4

20. In a typical week of lessons in your math class, what percentage of time is/was spent on each of the following?

Write in a percentage for each type of activity.

- a. administrative tasks _____ %
- b. homework review _____ %
- c. lecture-style presentation by the instructor _____ %
- d. instructor-guided student practice _____ %
- e. re-teaching and clarification of content/procedures _____ %
- f. work in small groups _____ %
- g. student independent practice _____ %
- h. tests and quizzes _____ %
- i. other (Please specify: _____) _____ %

SECTION IV: USE OF TEXTBOOKS/OTHER MATERIALS

This section asks about the textbook(s) you used for the mathematics class.

21. Which statement best describe your use of the mathematics textbook?

Please circle a letter which describes your textbook use the best.

- a. A single textbook is my main curriculum resource.
- b. I use multiple textbooks equally as my curriculum resources.
- c. I use other curriculum resources as much as I use textbooks.
- d. I mainly use curriculum resources other than textbooks.
- e. I do not use a textbook. I use only supplementary resources. → If you do not use a textbook, please skip to question 28.

22. Which textbook do/did you use as your primary textbook? Are you familiar with the contents of other textbooks? Please check one box in the first column for the textbook you use(d) as your primary textbook, or the one that you use(d) the most. If you use more than one textbook equally, choose one to designate as your primary textbook. If you are familiar with the contents of other textbooks, please check all that apply in the second column.

	Primary textbook (Check one)	Other textbook(s) which you use (Check all that apply)	Textbook(s) with which you are familiar (Check all that apply)
a. Bassarear, T. (2005). <i>Mathematics for elementary school teachers, 3rd edition</i> : Houghton Mifflin.	[]	[]	[]
b. Beckmann, S. (2005). <i>Mathematics for elementary school teachers</i> (1st ed.). Boston, MA: Pearson/Addison Wesley.	[]	[]	[]
c. Bennett, A., & Nelson, L. T. (2004). <i>Math for elementary teachers: A conceptual approach</i> , sixth edition: McGraw-Hill.	[]	[]	[]
d. Billstein, R., Libeskind, S., & Lott, J. W. (2004). <i>A problem solving approach to mathematics for elementary school teachers, 8th edition</i> . Boston, MA: Addison Wesley.	[]	[]	[]
e. Darken, B. (2003). <i>Fundamental mathematics for elementary and middle school teachers</i> : Kendall/Hunt.	[]	[]	[]
f. Jensen, G. R. (2003). <i>Arithmetic for teachers: With applications and topics from geometry</i> : American Mathematical Society.	[]	[]	[]
g. Jones, P., Lopez, K. D., & Price, L. E. (1998). <i>A mathematical foundation for elementary teachers</i> . New York: Pearson/Addison Wesley.	[]	[]	[]
h. Long, C. T., & DeTemple, D. W. (2006). <i>Mathematical reasoning for elementary teachers, 4th edition</i> (4 ed.): Addison Wesley.	[]	[]	[]
i. Masingila, J. O., Lester, F. K., & Raymond, A. M. (2002). <i>Mathematics for elementary teachers via problem solving</i> : Prentice Hall.	[]	[]	[]
j. Musser, G. L., Burger, W. F., & Peterson, B. E. (2003). <i>Mathematics for elementary school teachers: A contemporary approach</i> (6th ed.). New York: John Wiley & Sons.	[]	[]	[]
k. O'Daffer, P., Charles, R., Cooney, T., Dossey, J., & Schielack, J. (2005). <i>Mathematics for elementary school teachers, 3rd edition</i> . Boston: Pearson Education.	[]	[]	[]
l. Parker, T. H., & Baldrige, S. J. (2004). <i>Elementary mathematics for teachers (volume 1)</i> . Okemos, MI: Sefton-Ash Publishing.	[]	[]	[]
m. Sonnabend, T. (2004). <i>Mathematics for elementary teachers: An interactive approach for grades k-8</i> , 3rd edition: Brooks/Cole.	[]	[]	[]
n. Wheeler, R. E., & Wheeler, E. R. (2002). <i>Modern mathematics</i> (Eleventh ed.): Kendall/Hunt Publishing Company.	[]	[]	[]
o. Other (Specify title, author/publisher, and edition/year: _____)	[]	[]	[]

23. Approximately what percentage of your weekly class time is/was based on the primary textbook you indicated in #22 above?

- a. 0 – 20%
- b. 21 – 40%
- c. 41 – 60%
- d. 61 – 80%
- e. 81 – 100%

24. How many chapters are in the textbook you identified as your primary textbook in #22 above?

_____ Chapters

25. Which chapters in the textbook you identified as your primary textbook in #22 above do/did you cover in your mathematics course, including chapters you may have only partially covered?

Check the box next to each chapter number you covered in your mathematics course.

- | | | | | | | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| <input type="checkbox"/> 11 | <input type="checkbox"/> 12 | <input type="checkbox"/> 13 | <input type="checkbox"/> 14 | <input type="checkbox"/> 15 | <input type="checkbox"/> 16 | <input type="checkbox"/> 17 | <input type="checkbox"/> 18 | <input type="checkbox"/> 19 | <input type="checkbox"/> 20 |
| <input type="checkbox"/> 21 | <input type="checkbox"/> 22 | <input type="checkbox"/> 23 | <input type="checkbox"/> 24 | <input type="checkbox"/> 25 | <input type="checkbox"/> 26 | <input type="checkbox"/> 27 | <input type="checkbox"/> 28 | <input type="checkbox"/> 29 | <input type="checkbox"/> 30 |
| <input type="checkbox"/> 31 | <input type="checkbox"/> 32 | <input type="checkbox"/> 33 | <input type="checkbox"/> 34 | <input type="checkbox"/> 35 | <input type="checkbox"/> 36 | <input type="checkbox"/> 37 | <input type="checkbox"/> 38 | <input type="checkbox"/> 39 | <input type="checkbox"/> 40 |
| <input type="checkbox"/> 41 | <input type="checkbox"/> 42 | <input type="checkbox"/> 43 | <input type="checkbox"/> 44 | <input type="checkbox"/> 45 | <input type="checkbox"/> 46 | <input type="checkbox"/> 47 | <input type="checkbox"/> 48 | <input type="checkbox"/> 49 | <input type="checkbox"/> 50 |

26. How closely do/did the topics you teach in your mathematics course follow the order of topics covered in the textbook?

- a. I follow the order presented by the textbook exactly.
- b. I mostly follow the order presented by the textbook, but a couple of topics may be out of order.
- c. I use the textbook, but use my own order.

27. When planning your mathematics lessons, what are/were your sources of written information when doing each of the following activities?

Circle all that apply in each column.

	a.	b.	c.	d.
	Deciding which topics to teach.	Deciding how to present a topic.	Selecting problems and exercises for work in class and homework.	Selecting problems and applications for assessment and evaluation.
Primary textbook identified in #22 above	1	1	1	1
Other textbook(s)	2	2	2	2
NCTM Principles and Standards	3	3	3	3
Praxis I: Pre-Professional Skills Assessment	4	4	4	4
Praxis II: Principles of Learning and Teaching, Subject Assessments, Teaching Foundations: Mathematics	5	5	5	5
Departmental curriculum guide	6	6	6	6
Departmental syllabus for this course	7	7	7	7
State curriculum guide for K-8 mathematics	8	8	8	8
State pedagogy guide for K-8 mathematics	9	9	9	9
State pedagogy guide for mathematics	10	10	10	10
Adding It Up: Helping Students Learn Mathematics	11	11	11	11
Other curriculum resource(s) (Specify: _____)	12	12	12	12

SECTION V: OPPORTUNITY TO LEARN

The purpose of this section is to obtain a description of the specific mathematics topics covered in your class. On the next few pages is a list of topics that may be taught in this type of mathematics course. Not all topics would necessarily be appropriate for your class. Nevertheless, please respond to the **entire list** so that we may obtain an indication of the topics covered in your class that is as complete and accurate as possible.

- Before marking, please read quickly through the entire list to obtain an idea of where various topics you’ve taught or will teach may be found. Please respond to all topics as illustrated in the example below.
- For each listed topic, please indicate the approximate number of class meetings you taught or will teach the topic this term to your mathematics class.
- Also, please indicate which of the following six types of performances you most often expected from your students with respect to each listed topic in the second set of columns. If you also expected another type of performance from your students with respect to this topic, please indicate this in the third set of columns.

Types of mathematical performances that may be expected from students:

- Conceptual understanding—comprehension of mathematical concepts, operations, and relations
- Procedural fluency—skill in carrying out procedures flexibly, accurately, efficiently, and appropriately
- Problem solving—ability to formulate, represent, and solve mathematical problems
- Justification and proof—ability to justify, prove, and formalize algorithms or axioms
- Connections—ability to make connections between and among mathematical ideas and understand the logical structure of mathematics
- K-8 student learning—Evaluating the work of K-8 students; discussing common K-8 student errors

To what extent did/will you teach each of the following topics to your mathematics class during this term? When you taught each of the following topics, which of the seven types of performances did you most often expect from your students? Which of these (if any) did you expect only occasionally?

Circle **one** number for the appropriate **number of class meetings** in each row. Then circle the **one** appropriate letter for the **performance most often expected** with respect to each topic and **all** applicable letter(s) for the performance(s) you may have **occasionally** expected.

EXAMPLE	<u>Class meetings taught during the term</u>					<u>Student performance MOST often expected</u>						<u>Student performance(s) occasionally expected</u>					
	<i>(Circle one only)</i>					<i>(Circle one only)</i>						<i>(Circle all that apply)</i>					
Whole numbers, Number Sense, and Fractions																	
a. Place value	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f

28. To what extent did/will you teach each of the following topics to your mathematics class during this term? When you taught each of the following topics, which of the seven types of performances did you most often expect from your students? Which of these (if any) did you expect only occasionally?

Circle **one** number for the appropriate **number of class meetings** in each row. Then circle the **one** appropriate letter for the **performance most often expected** with respect to each topic and **all** applicable letter(s) for the performance(s) you may have **occasionally** expected.

	<u>Class meetings taught during the term</u>					<u>Student performance MOST often expected</u>						<u>Student performance(s) occasionally expected</u>					
	<i>(Circle one only)</i>					<i>(Circle one only)</i>						<i>(Circle all that apply)</i>					
Whole numbers, Number Sense, and Fractions																	
a. Place value	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
b. Prime factorization	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
c. Estimation	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
d. Definition and meaning of operations	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
e. Standard algorithms for operations	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
f. Alternative algorithms for operations	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
g. Understanding and representing common fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
h. Computations with common fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
i. Understanding and representing decimal fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
j. Computations with decimal fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
k. Number lines	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
l. Computations with percentages and problems involving percentages	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
m. Properties of whole numbers such as odd and even, multiples, or factors	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
n. Compare and order common fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
o. Compare and order decimal fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
p. Simple proportional reasoning	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f

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	Class meetings taught during the term					Student performance MOST often expected						Student performance(s) occasionally expected					
	<i>(Circle one only)</i>					<i>(Circle one only)</i>						<i>(Circle all that apply)</i>					
Multiplication	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
q. Multiplication as repeated addition	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
r. Multiplication as area of a rectangle	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
s. Multiplication represented on the number line	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
t. Multiplication as measurement or comparison	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
u. Algorithm(s) for multidigit multiplication	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
v. Multiplication of common fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
w. Multiplication of decimal fractions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
x. Multiplication of integers	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
y. Multiplication with algebraic expressions	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f
z. Properties of multiplication such as commutative, associative	0	≤1	2-3	4-6	>6	a	b	c	d	e	f	a	b	c	d	e	f

29. Some instructors teach topics concerning mathematical reasoning and proof only indirectly through other topics. Did/will you teach the following reasoning and proof topics directly or indirectly. If you taught these topics directly, how many class meetings did/will you teach them this term?

	Taught directly as an independent topic	Taught indirectly through other topics <i>(Check one only)</i>	Did not teach this topic	If you taught this directly, how many class meetings did you teach this topic this term? <i>(Circle one only)</i>			
				≤1	2-3	4-6	>6
a. Problem solving	[]	[]	[]	≤1	2-3	4-6	>6
b. Justifications/explanations (but not to the level of proofs)	[]	[]	[]	≤1	2-3	4-6	>6
c. Proof by counterexample	[]	[]	[]	≤1	2-3	4-6	>6
d. Proof by contradiction	[]	[]	[]	≤1	2-3	4-6	>6
e. Logical reasoning (including rules of logic)	[]	[]	[]	≤1	2-3	4-6	>6
f. Definitions (as mathematical objects)	[]	[]	[]	≤1	2-3	4-6	>6
g. Mathematical induction	[]	[]	[]	≤1	2-3	4-6	>6
h. Deductive reasoning	[]	[]	[]	≤1	2-3	4-6	>6
i. Indirect proof	[]	[]	[]	≤1	2-3	4-6	>6
j. Formal proof	[]	[]	[]	≤1	2-3	4-6	>6

SECTION VI: DEMOGRAPHICS

This section asks about for personal demographic information.

30. What is your year of birth? _____

31. Are you male or female?

- a. Male
- b. Female

32a. Are you Hispanic or Latino?

- a. Yes
- b. No

32b. Please select one or more of the following choices to best describe your race.

Mark (X) all that apply.

- White
- Black or African-American
- Asian
- Native Hawaiian or other Pacific Islander
- American Indian or Alaska Native

33. How many years of teaching at the college-level do you have?

_____ Years of teaching experience

34. How many times have you previously taught this particular mathematics course?

_____ Number of times I previously taught this course

35. Do you have experience teaching at the K-12 level?

- a. Yes
- b. No

36 a. Do you have a teaching certificate, current or expired?

- a. Yes
- b. No

36 b. If yes, in what area? _____

37. Have you ever received any training or preparation from your department for teaching this mathematics course?

- a. Yes, I received training to teach college students.
- b. Yes, I received training specifically to teach prospective elementary teachers.
- c. No, I have not received any type of training.

38. Before the start of this semester, how much interest did you have in teaching this mathematics course?

- a. A great deal of interest
- b. Some interest
- c. Limited interest
- d. No interest at all

39. At this point in the semester, how much interest did you have in teaching this mathematics course again?

- a. A great deal of interest
- b. Some interest
- c. Limited interest
- d. No interest at all

40. What is the highest degree you have completed? Do not include honorary degrees.

If you have none of the degrees or awards, select "Not applicable."

- a. Not applicable (Do not hold a degree)
- b. Doctoral degree (Ph.D., Ed.D., etc)
- c. First-professional degree (M.D., D.O., D.D.S. or D.M.D., L.L.B., J.D., D.C. or D.C.M., Pharm.D., Pod.D. or D.P., D.V.M., O.D., M.DIV. or H.H.L. or B.D.)
- d. Master of Fine Arts, Master of Social Work (M.F.A., M.S.W.)
- e. Other master's degrees (M.A., M.S., M.B.A., M.Ed., etc)
- f. Bachelor's degree (B.A., A.B., B.S., etc)
- g. Associate's degree or equivalent (A.A., A.S., etc)
- h. Certificate or diploma for completion of undergraduate program (other than associate's or bachelor's)

41. In what year did you receive your highest degree?

If you have more than one degree at the same level, please select the most recent degree.

_____ Year received

42. In what year did you receive your bachelor's degree?

If you have more than one degree at this level, please select the first degree.

_____ Year received

Not applicable (Do not have a bachelor's degree)

43. What are the subject(s) for each of your degrees? Check one for each degree.

	Bachelor's degree	Master's degree	Doctorate
a. Mathematics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Computer Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Mathematics Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Elementary Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other Education (e.g. History Education, Special Education)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (Please specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. Which of the following college courses have you completed? Include both semester hour and quarter hour courses, whether at the undergraduate or graduate level. Check all that apply

MATHEMATICS

- Mathematics for elementary school teachers
- Mathematics for middle school teachers
- Geometry for elementary/middle school teachers
- College algebra, trigonometry, elementary functions
- Calculus
- Advanced calculus
- Real analysis
- Differential equations
- Geometry
- Probability and statistics
- Abstract algebra
- Number theory
- Linear algebra
- Applications of mathematics/problem solving
- History of mathematics
- Discrete mathematics
- Other upper division mathematics
- Computer programming
- Other computer science

EDUCATION

- General methods of teaching
- Methods of teaching mathematics
- Instructional uses of computers/other technologies
- Supervised student teaching in mathematics
- Supervised student teaching in elementary or middle school

45a. What is your academic rank, title, or position at this college or university?

- | | |
|---|---|
| a. Not applicable (no formal ranks at this institution) | f. Lecturer |
| b. Professor | g. Other title (e.g., Administrative, Adjunct, Emeritus, Other) |
| c. Associate Professor | h. Master's Student |
| d. Assistant Professor | i. Doctoral Student |
| e. Instructor | |

45b. In what year do you expect to complete your degree? _____

46. What is your tenure status?

- a. Tenured
- b. On tenure track but not tenured
- c. Not on tenure track
- d. Not tenured because institution has no tenure system

47. How long did it take you to complete this survey? _____ Minutes

48. Please tell us anything about your class that you think is important but was not covered on this survey.
