

Appendix IV

Four-Year Mathematics Questionnaire



SURVEY OF UNDERGRADUATE PROGRAMS IN THE MATHEMATICAL SCIENCES

General Information

Mathematics Questionnaire

As part of a random sample, your department has been chosen to participate in the NSF-funded CBMS2010 National Survey of Undergraduate Mathematical Sciences Programs. Even though it is a very complicated survey, the presidents of all U.S. mathematical sciences organizations have endorsed it and ask for your cooperation.

We assure you that no individual departmental data, except the names of responding departments, will be released.

This survey provides data about the nation's undergraduate mathematical and statistical effort that is available from no other source. You can see the results of a similar survey fielded five years ago by going to www.ams.org/cbms, where the CBMS 2005 report is available online.

All departments in this survey are in universities and colleges that offer at least a bachelor's degree. They may or may not offer a major in mathematics. Many of the departments in our random sample also offer higher degrees in mathematical sciences.

We have classified your department as belonging to a university or four-year college. If this is not correct, please contact Ellen Kirkman, Survey Director, at 336-758-5351 or at Kirkman@wfu.edu.

Please report on undergraduate programs in the broadly defined mathematical sciences (including applied mathematics, statistics, operations research, and computer science) that are under the direction of your department. Do not include data for other departments or for branches or campuses of your institution that are budgetarily separate from your own. Also, if your department is broader than just mathematics (e.g., Division of Mathematics and Sciences), please report only on the mathematics courses (as broadly defined here).

This survey may be completed either online or using a hard-copy questionnaire. We recommend using the online system because it will do some of the work for you; e.g., it will automatically skip those questions that are not applicable (based on the response you give), gray out portions of questions that do not apply, remind you of previous responses, and provide definitions when you let your cursor hover certain highlighted words.

If you have any questions while filling out this survey form, please call the Survey Director, Ellen Kirkman, at 336-758-5351 or contact her by e-mail at Kirkman@wfu.edu. For help with the online questionnaire, call Westat at 888-248-5017 or send an email to cbms@westat.com.

Please complete the questionnaire by November 9, 2010, either online or by mailing a hard copy to:

**CBMS Survey
Westat
1600 Research Boulevard
Rockville, MD 20850-3129**

Please retain a copy of your responses to this questionnaire in case questions arise.

A. General Information

Mathematics Questionnaire

A1. Name of your institution: _____

A2. Name of your department: _____

A3. We have classified your department as being part of a university or four-year college. Do you agree?

Yes _____ → If Yes, go to A4 below.No _____ → If No, please call Ellen Kirkman, Survey Director, at 336-758-5351.A4. If your college or university does not recognize tenure, check this box. A5. Contact person in your department: A6. Contact person's e-mail address: A7. Contact person's phone number including area code: ()

A8. Contact person's mailing address:

a. Street..... b. Street2..... c. City d. State..... e. Zip code

B. Dual Enrollment Courses

Mathematics Questionnaire

B1. We use the term dual enrollment courses to refer to courses conducted on a high school campus and taught by high school teachers, for which high school students may obtain high school credit and, simultaneously, college credit through your institution. Does your department participate in any dual enrollment programs of this type?

Yes _____ → If Yes, go to B2.

No _____ → If No, go to B6.

B2. Please complete the following table concerning your dual enrollment program (as defined above) for the previous term (spring 2010) and the current fall term of 2010.

Course	Total Dual Enrollments	
	Last Term= Spring 2010	This Term= Fall 2010
a. College Algebra.....		
b. Pre-calculus		
c. Calculus I		
d. Statistics.....		
e. Other.....		

B3. For the dual enrollment courses in B2, to what extent are the following the responsibility of your department? (Choose one on each line.)

	Never Our Responsibility	Sometimes Our Responsibility	Always Our Responsibility
a. Choice of textbook.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Design/approval of syllabus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Design of final exam.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Choice of instructor.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B4. Does your department have a teaching evaluation program in which your part-time department faculty are required to participate?

Yes _____ → If Yes, go to B5.

No _____ → If No, go to B6.

B5. Are instructors in the dual enrollment courses reported in B2 required to participate in the teaching evaluation program for part-time departmental faculty described in B4?

Yes

No.....

B. Dual Enrollment Courses (continued)

Mathematics Questionnaire

- B6. Does your department assign any of its own full-time or part-time faculty to teach courses conducted on a high school campus for which high school students may receive both high school and college credit (through your institution)?

Yes _____ → If Yes, go to B7.

No _____ → If No, go to Section C.

- B7. How many students are enrolled in the courses conducted on a high school campus and taught by your full-time or part-time faculty and through which high school students may receive both high school and college credit (through your institution)?

Number of students.....

*In subsequent sections we ask about course enrollments in your department; please **do not** include any of the enrollments reported in this Section B.*

C. Distance Learning

Mathematics Questionnaire

Definition: Distance learning courses are those courses in which the majority of the instruction occurs with the instructor and the students separated by time and /or place (e.g. courses in which the majority of the course is taught online, or by computer software, by television, or by correspondence).

C1. Does your department offer distance learning courses?

Yes

No → If No, skip to D1.

C2. Which best characterizes the format/structure of the majority of your distance learning courses?

All instruction is conducted without an instructor being physically present

Some instruction is conducted with an instructor being physically present.....

C3. Which one response best describes the general pattern for how the instructional materials used in your distance learning courses are determined?

Course instructors create materials.....

Course instructors choose commercially produced materials.....

Course instructors choose a combination of both.....

C4. In most of your distance learning courses, how are the majority of the tests administered? (Choose one response.)

Not at a monitored testing site (e.g., online or by correspondence).....

At a monitored testing site.....

Combination of both.....

C5. Does your institution give mathematics credit for distance learning courses that are not offered through your department?

Yes

No

No department policy.....

C. Distance Learning (continued)

Mathematics Questionnaire

C6. Are there any courses that you offer in both non-distance learning and in distance learning formats?

Yes..... → If Yes, go to C7 below.

No → If No, go to D1.

C7. Are the content, goals, and objectives of the distance learning courses generally the same as those in the non-distance learning courses of the same title?

Yes.....

No

C8. Do the course instructors in your distance learning courses generally:

	Yes	No
a. Hold office hours to meet with students on campus as in comparable non-distance learning courses taught on campus?..	<input type="checkbox"/>	<input type="checkbox"/>
b. Participate in evaluation of instruction in the same way as faculty who teach comparable non-distance learning courses?...	<input type="checkbox"/>	<input type="checkbox"/>

C9. Which, if any, of the following practices apply to the majority of distance learning courses in your department? Check one response on each line.

	Yes	No
a. Same use of common examinations (if any) as in the non-distance learning courses	<input type="checkbox"/>	<input type="checkbox"/>
b. Same common course outlines as in the non-distance learning course	<input type="checkbox"/>	<input type="checkbox"/>
c. Same course projects as in the non-distance learning course...	<input type="checkbox"/>	<input type="checkbox"/>

D. Faculty Profile (Fall 2010)

Mathematics Questionnaire

Please indicate whether the following types of faculty are actively teaching one or more courses in fall 2010.

Definitions

- **Full-time faculty.** Faculty who are full-time employees in the institution and more than half-time in the department. For example, if a tenured physics professor with a joint appointment in your department teaches a total of two courses in fall 2010, with exactly one being in your department (i.e., mathematics is 50% of the fall teaching assignment) , then that person would be counted as part-time in your department.
- **Permanent faculty.** If your institution does not recognize tenure, please report full-time departmental faculty who are permanent on line D1a and report all other faculty on the remaining lines as appropriate.

Faculty Type	Teach in Fall 2010	
	Yes	No
D1. Full-time faculty		
a. Tenured, tenure-eligible, or permanent faculty.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Other full-time faculty.....	<input type="checkbox"/>	<input type="checkbox"/>
D2. Part-time faculty	<input type="checkbox"/>	<input type="checkbox"/>
D3. Graduate teaching assistant(s) who teach courses independently (not counting the teaching of recitation sessions).....	<input type="checkbox"/>	<input type="checkbox"/>

E. Mathematics Courses (Fall 2010)

Mathematics Questionnaire

In the next several pages you will enter data about courses you are teaching. For each course that is taught, you will be asked to enter the fall 2010 enrollment and the number of sections of the course. Depending upon the type of course, you will be asked about distance learning enrollment and the numbers of each kind of faculty (tenure eligible, part time, etc.) who are teaching the course. Also, you may not teach some of your advanced courses in every term; for those courses we also ask whether the course was offered in spring 2010 or will be offered in spring 2011 (please combine the winter and spring terms if your institution uses the quarter system); please answer these questions regardless of whether you offer the courses in fall 2010.

The following instructions apply throughout Sections E, F, and G (pages 8-23).

- Report distance learning enrollments separately from other enrollments. A *distance learning* course is one in which the majority of instruction occurs with the instructor and the students separated by time and place (e.g., courses in which the majority of the course is taught online or by computer software or correspondence).
- Do NOT include any dual enrollment sections or enrollments in these tables. (In this questionnaire, a *dual enrollment* section is one that is conducted on a high school campus, taught by a high school teacher, and allows students to receive high school credit and, simultaneously, college credit from your institution for the course. These courses were reported in Section B.)
- For Calculus and Introductory Statistics classes, you will be asked to list separately classes taught in a large lecture format (with recitation sections) and classes taught by a single instructor (these classes are further broken down by enrollment of 30 or less and enrollment over 30). For example, for Mainstream Calculus I, you will be asked for both the number of large lecture courses (E12-1 column (c)) and the total number of recitation sections for all the large lectures (E12-2 column (c)). For all courses except as marked in E12, E13, E14, E15, F1, and F2, please do not treat recitation sessions as separate sections. Instead, please treat both the lecture component and any associated recitation sessions as a single section.
- Report a section of a course as being taught by a *graduate teaching assistant (GTA)* if and only if that section is taught *independently* by the GTA, i.e., when it is the GTA's own course and the GTA is the instructor of record.
- If your institution does not recognize tenure, report sections taught by your permanent full-time faculty in column (d) and sections taught by other full-time faculty in column (e).
- Full-time faculty teaching in your department and holding joint appointments with other departments should be counted in column (d) if they are tenured, tenure-eligible, or permanent in your department. Faculty who are not tenured, tenure-eligible, or permanent in your department should be counted in column (f) if their fall 2010 teaching in your department is less than or equal to 50% of their total fall teaching assignment, and they should be reported in column (e) otherwise. (Example: if a tenured physics professor with a joint appointment in your department teaches a total of two courses in fall 2010, with exactly one being in your department and hence mathematics comprised 50% of the fall teaching assignment, then that person would be counted as part-time in your department.)
- Do not fill in any shaded boxes.
- Any unshaded box that is left blank will be interpreted as reporting a count of zero.
- Except where specifically stated to the contrary, the tables in Sections E, F, and G deal with enrollments in fall term 2010.
- If a section is co-taught by multiple faculty, categorize the section in terms of the most senior faculty member teaching that course.

Mathematics Questionnaire

E. Mathematics Courses (Fall 2010) cont.

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Full-time Faculty ³ Tenured, Tenure- eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Part-time Faculty (f)	Graduate Teaching Assistants ⁴ (g)
MATHEMATICS							
PRECOLLEGE LEVEL							
E1. Precollege level (e.g., arithmetic, pre-algebra, elementary algebra, intermediate algebra)							
INTRODUCTORY LEVEL, INCLUDING PRE-CALCULUS							
E2. Mathematics for Liberal Arts							
E3. Finite Mathematics							
E4. Business Mathematics (non-Calculus)							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.

³ Count faculty with joint appointments in column (d) or (e) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.

⁴ Sections taught independently by GTAs .

E. Mathematics Courses (Fall 2010) (continued)

Mathematics Questionnaire

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:		
				Full-time Faculty ³		Part-time Faculty (f)
	(a)	(b)	(c)	Tenured, Tenure- eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Graduate Teaching Assistant's (g)
MATHEMATICS						
INTRODUCTORY LEVEL, INCLUDING PRE-CALCULUS, CONT.						
E5. Mathematics for pre-service K-8 School Teachers (all courses)						
E6. College Algebra (not included in the Precollege E1 above)						
E7. Trigonometry						
E8. College Algebra & Trigonometry (combined)						
E9. Elementary Functions, Pre-calculus, Analytic Geometry						
E10. Introduction to Mathematical Modeling						
E11. All other introductory-level non-Calculus courses						

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.

³ Count faculty with joint appointments in column (d) or (e) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.

⁴ Sections taught independently by GTAs .

E. Mathematics Courses (Fall 2010) (continued)

Mathematics Questionnaire

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corres- ponding to column (b) (c)	Of the number in column (c), how many sections are taught by:				
				Full-time Faculty ³				
				Tenured, Tenure- eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Part-time Faculty (f)	Graduate Teaching Assistants ⁴ (g)	
MATHEMATICS								
MAINSTREAM⁵ CALCULUS I								
E12-1. Lecture with separately scheduled recitation/problem/laboratory sessions ⁶								
E12-2. Number of recitation/problem/laboratory sessions associated with courses reported in E12-1. See example ⁷ below.								
E12-3. Sections not in E12-1 with enrollments of 30 or less								
E12-4. Sections not in E12-1 with enrollments above 30								
MAINSTREAM⁵ CALCULUS II								
E13-1. Lecture with separately scheduled recitation/problem/laboratory sessions ⁶								
E13-2. Number of recitation/problem/laboratory sessions associated with courses reported in E13-1. See example ⁷ below.								
E13-3. Sections not in E13-1 with enrollments of 30 or less								
E13-4. Sections not in E13-1 with enrollments above 30								

¹ A majority of students receive the majority of their instruction via Internet. TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.

³ Count faculty with joint appointments in column (d) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.

⁴ Sections taught independently by GTAs.

⁵ A calculus course is mainstream if it leads to the usual upper division mathematical sciences courses.

⁶ Report a calculus class along with its recitation/problem/laboratory sessions as one section in column (c) of E12-1, E13-1, E14-1, and E15-1.

⁷ Example: suppose your department offers four 100-student sections of a course and that each is divided into five 20-student discussion sessions that meet separately from the lectures. Report 4 * 5 = 20 recitation/problem/laboratory sessions associated with the course, even if each discussion meets several times per week.

E. Mathematics Courses (Fall 2010) (continued)

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Full-time Faculty ³			
				Tenured, Tenure-eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Part-time Faculty (f)	
Graduate Teaching Assistants ⁴ (g)							
MATHEMATICS							
MAINSTREAM⁵ CALCULUS III (and IV, etc.)							
E14-1. Lecture with separately scheduled recitation/problem/laboratory sessions ⁶							
E14-2. Number of recitation/problem/laboratory sessions associated with courses reported in E14-1. See example ⁷ below.							
E14-3. Sections not in E14-1 with enrollments of 30 or less							
E14-4. Sections not in E14-1 with enrollments above 30							
NON-MAINSTREAM⁵ CALCULUS I							
E15-1. Lecture with separately scheduled recitation/problem/laboratory sessions ⁶							
E15-2. Number of recitation/problem/laboratory sessions associated with courses reported in E15-1. See example ⁷ below.							
E15-3. Sections not in E15-1 with enrollments of 30 or less							
E15-4. Sections not in E15-1 with enrollments above 30							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.
² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.
³ Count faculty with joint appointments in column (d) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.
⁴ Sections taught independently by GTAs.
⁵ A calculus course is mainstream if it leads to the usual upper division mathematical sciences courses.
⁶ Report a calculus class along with its recitation/problem/laboratory sessions as one section in column (c) of E12-1, E13-1, E14-1, and E15-1.
⁷ Example: suppose your department offers four 100-student sections of a course and that each is divided into five 20-student discussion sessions that meet separately from the lectures. Report 4*5=20 recitation/problem/laboratory sessions associated with the course, even if each discussion meets several times per week.

E. Mathematics Courses (Fall 2010) (continued)

Mathematics Questionnaire

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corres- ponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Tenured, Tenure- eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Part-time Faculty (f)	
Graduate Teaching Assistant's (g)							
MATHEMATICS							
CALCULUS LEVEL, CONT.							
E16. Non-mainstream ⁵ Calculus I, II, III, etc.							
E17. Differential Equations and Linear Algebra (combined)							
E18. Differential Equations							
E19. Linear Algebra or Matrix Theory							
E20. Discrete Mathematics							
E21. Other calculus-level courses							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.

³ Count faculty with joint appointments in column (d) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.

⁴ Sections taught independently by GTAs.

⁵ A calculus course is mainstream if it leads to the usual upper division mathematical sciences courses.

E. Mathematics Courses (Fall 2010) (continued)

Mathematics Questionnaire

In reporting on advanced courses, please pay special attention to the following instructions:

- If an undergraduate course contains a mixture of graduate and undergraduate students, report them all in column (a).
- If your institution does not recognize tenure, report sections taught by your permanent faculty in column (c).
- Make sure that no course is reported in more than one row.
- Respond to columns (d) and (e) for every course, even if the course is not offered in fall 2010.

◆ **Cells left blank will be interpreted as zeros.**

Name of Course (or equivalent)	Total enrollment fall 2010 (a)	Number of sections corresponding to column (a) (b)	Number of sections corresponding to column (b) Taured, Tenure-eligible, or Permanent Faculty (c)	Whether or not the course was offered in fall 2010:			
				Was this course taught in ANY term of the previous academic year? (d)	Yes	No	Will this course be offered in the next term (spring 2011)? (e)
				Yes	No	Yes	No
MATHEMATICS							
ADVANCED UNDERGRADUATE LEVEL							
E22. Introduction to Proofs				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E23-1. Modern Algebra I				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E23-2. Modern Algebra II				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E24. Number Theory				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E25. Combinatorics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E26. Actuarial Mathematics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E27. Logic/Foundations (not E22)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E28. Discrete Structures				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E29. History of Mathematics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E30. Geometry				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E. Mathematics Courses (Fall 2010) (continued)

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total enrollment fall 2010 (a)	Number of sections corresponding to column (a) (b)	Number of sections corresponding to column (b) Taught by Tenured, Tenure- eligible, or Permanent Faculty (c)	Whether or not the course was offered in fall 2010:		Will this course be offered in the next term (spring 2011)? (e)	
				Was this course taught in ANY term of the previous academic year? (d)			
MATHEMATICS				Yes	No	Yes	No
ADVANCED UNDERGRADUATE LEVEL, CONT.							
E31-1. Advanced Calculus I and/or Real Analysis I				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E31-2. Advanced Calculus II and/or Real Analysis II				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E32. Advanced Mathematics for Engineering and Physical Sciences (all courses)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E33. Advanced Linear Algebra (beyond E17, E19)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E34. Vector Analysis				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E35. Advanced Differential Equations (beyond E18)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E36. Partial Differential Equations				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E37. Numerical Analysis I and II				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E38. Applied Mathematics (Modeling)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E. Mathematics Courses (Fall 2010) (continued)

Mathematics Questionnaire

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total enrollment fall 2010 (a)	Number of sections corresponding to column (a) (b)	Number of sections corresponding to Tenured, Tenure-eligible, or Permanent Faculty (c)	Whether or not the course was offered in fall 2010:		Will this course be offered in the next term (spring 2011)? (e)	
				Was this course taught in ANY term of the previous academic year? (d)			
				Yes	No	Yes	No
MATHEMATICS							
ADVANCED UNDERGRADUATE LEVEL, CONT.							
E39. Complex Variables				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E40. Topology				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E41. Mathematics of Finance (not E26, E38)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E42. Codes and Cryptology				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E43. Biomathematics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E44. Operations Research (all courses)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E45. Senior Seminar/ Independent Study in Mathematics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E46. All other advanced level mathematics (excluding Math for Secondary School Teachers, Probability or Statistics courses)							
E47. Mathematics for Secondary School Teachers (all such courses not counted above)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E48. Do you offer any advanced undergraduate mathematics courses (E22-E47) as distance learning courses?

Yes \longrightarrow If Yes, go to E49 below.

No \longrightarrow If No, go to Section F.

E49. Please indicate which advanced undergraduate mathematics courses you offer as distance learning courses. (Check all that apply.)

Course	Offer as distance learning
E22. Introduction to Proofs	<input type="checkbox"/>
E23-1. Modern Algebra I.....	<input type="checkbox"/>
E23-2. Modern Algebra II.....	<input type="checkbox"/>
E24. Number Theory	<input type="checkbox"/>
E25. Combinatorics	<input type="checkbox"/>
E26. Actuarial Mathematics	<input type="checkbox"/>
E27. Logic/Foundations (not E22).....	<input type="checkbox"/>
E28. Discrete Structures.....	<input type="checkbox"/>
E29. History of Mathematics.....	<input type="checkbox"/>
E30. Geometry	<input type="checkbox"/>
E31-1. Advanced Calculus I and/or Real Analysis I.....	<input type="checkbox"/>
E31-2. Advanced Calculus II and/or Real Analysis II.....	<input type="checkbox"/>
E32. Advanced Mathematics for Engineering and Physical Sciences (all courses)....	<input type="checkbox"/>
E33. Advanced Linear Algebra (beyond E17, E19).....	<input type="checkbox"/>
E34. Vector Analysis.....	<input type="checkbox"/>
E35. Advanced Differential Equations (beyond E18).....	<input type="checkbox"/>
E36. Partial Differential Equations	<input type="checkbox"/>
E37. Numerical Analysis I and II	<input type="checkbox"/>
E38. Applied Mathematics (Modeling).....	<input type="checkbox"/>
E39. Complex Variables	<input type="checkbox"/>
E40. Topology	<input type="checkbox"/>
E41. Mathematics of Finance (not E26, E38).....	<input type="checkbox"/>
E42. Codes and Cryptology.....	<input type="checkbox"/>
E43. Biomathematics.....	<input type="checkbox"/>
E44. Operations Research (all courses)	<input type="checkbox"/>
E45. Senior Seminar/ Independent Study in Mathematics	<input type="checkbox"/>
E46. Other advanced level mathematics (excluding Math for Secondary School Teachers, Probability or Statistics courses).....	<input type="checkbox"/>
E47. Mathematics for Secondary School Teachers (all such courses not counted above).....	<input type="checkbox"/>

F. Probability and Statistics Courses (Fall 2010)

F. Does your department offer any Probability and/or Statistics Courses?
 Yes..... → If Yes, go to F1 below.
 No → If No, go to Section G.

Please refer to the course reporting instructions at the beginning of Section E.

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:		
				Tenured, Tenure-eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	Part-time Faculty (f)
STATISTICS						
INTRODUCTORY LEVEL						
Introductory Statistics (no calculus prerequisite)						
F1-1. Lecture with separately scheduled recitation/problem/laboratory sessions ⁵						
F1-2. Number of recitation/problem/ laboratory sessions associated with courses reported in F1-1 ⁶						
F1-3. Other sections with enrollment of 30 or less						
F1-4. Other sections with enrollment above 30						
						Graduate Teaching Assistants ⁴ (g)

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.
² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.
³ Count faculty with joint appointments in column (d) or (e) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.
⁴ Sections taught independently by GTAs.
⁵ Report an introductory statistics class along with its recitation/problem/laboratory sessions as one section in column (c) of F1 and F-2.
⁶ Example: suppose your department offers four 100-student sections of a course and that each is divided into five 20-student discussion sessions that meet separately from the lectures. Report 4*5=20 recitation/problem/laboratory sessions associated with the course, even if each discussion meets several times per week.

Please refer to the course reporting instructions at the beginning of Section E.

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:		
				Full-time Faculty ³	Part-time Faculty (f)	Graduate Teaching Assistants ⁴ (g)
STATISTICS						
INTRODUCTORY LEVEL						
Introductory Statistics (calculus prerequisite) (for non-majors)						
F2-1. Lecture with separately scheduled recitation/problem/laboratory sessions				Tenured, Tenure-eligible, or Permanent Faculty (d)	Other Full-time Faculty (e)	
F2-2. Number of recitation/problem/laboratory sessions associated with courses reported in F2-1 ⁵						
F2-3. Other sections with enrollment of 30 or less						
F2-4. Other sections with enrollment above 30						
Other Introductory Statistics Courses						
F3. Probability & Statistics (no calculus prerequisite)						
F4. Other elementary level Probability & Statistics courses						

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollment courses, i.e., courses taught on a high school campus by a high school instructor for which high school students may obtain both high school credit and, simultaneously, college credit through your institution.

³ Count faculty with joint appointments in column (d) or (e) if more than 50 percent of their fall 2010 teaching assignments are within your department, and in column (f) otherwise.

⁴ Sections taught independently by GTAs.

⁵ Report an introductory statistics class along with its recitation/problem/laboratory sessions as one section in column (c) of F1 and F-2.

⁶ Example: suppose your department offers four 100-student sections of a course and that each is divided into five 20-student discussion sessions that meet separately from the lectures. Report 4*5=20 recitation/problem/laboratory sessions associated with the course, even if each discussion meets several times per week.

F. Probability and Statistics Courses (Fall 2010) (continued)

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total enrollment fall 2010 (a)	Number of sections corresponding to column (a) (b)	Number of sections corresponding to column (b) taught by Tenured, Tenure- eligible, or Permanent Faculty (c)	Was this course taught in ANY term of the previous academic year? (d)		Will this course be offered in the next term (spring 2011)? (e)	
				Yes	No	Yes	No
PROBABILITY & STATISTICS							
INTERMEDIATE AND ADVANCED LEVEL							
F5. Mathematical Statistics (calculus prerequisite)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F6. Probability (calculus prerequisite)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F7. Combined Probability & Statistics (calculus prerequisite)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F8. Stochastic Processes				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F9. Applied Statistical Analysis				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F10. Design & Analysis of Experiments				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F11. Regression (and Correlation)				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F12. Biostatistics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F13. Nonparametric Statistics				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F14. Categorical Data Analysis				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F15. Sample Survey Design & Analysis				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F16. Statistical Software & Computing				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F17. Data Management				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F18. Senior Seminar/ Independent Studies				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F19. All other upper level Probability & Statistics							

F20. Do you offer any advanced undergraduate courses in statistics (F5-F19) as distance learning courses?

Yes _____ → If Yes, go to F21 below.

No _____ → If No, go to Section G.

F21. Please indicate which advanced undergraduate mathematics courses you offer as distance learning courses. (Check all that apply.)

Course	Offer as distance learning
F5. Mathematical Statistics (calculus prerequisite).....	<input type="checkbox"/>
F6. Probability (calculus prerequisite).....	<input type="checkbox"/>
F7. Combined Probability & Statistics (calculus prerequisite)	<input type="checkbox"/>
F8. Stochastic Processes	<input type="checkbox"/>
F9. Applied Statistical Analysis	<input type="checkbox"/>
F10. Design & Analysis of Experiments	<input type="checkbox"/>
F11. Regression (and Correlation).....	<input type="checkbox"/>
F12. Biostatistics.....	<input type="checkbox"/>
F13. Nonparametric Statistics	<input type="checkbox"/>
F14. Categorical Data Analysis.....	<input type="checkbox"/>
F15. Sample Survey Design & Analysis.....	<input type="checkbox"/>
F16. Statistical Software & Computing.....	<input type="checkbox"/>
F17. Data Management	<input type="checkbox"/>
F18. Senior Seminar/ Independent Studies.....	<input type="checkbox"/>
F19. Other upper level Probability & Statistics	<input type="checkbox"/>

G. Does your department offer any Computer Science courses?

Yes _____ → If Yes, go to G1 below.

No..... _____ → If No, go to Section H.

- Please refer to the course reporting instructions at the beginning of Section E.
- In December 2001, a joint IEEE Computer Society/ACM Task Force issued its recommendations on “Computing Curricula 2001: Computer Science” That report replaced the curricula recommendations published by ACM in 1991 and is available by clicking here. Course titles in G-1 through G-17 are taken from that report.

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Tenured or Tenure-eligible Faculty (d)	Other Full-time Faculty with/without Ph.D. (e)	Part-time Faculty (f)	Graduate Teaching Assistants ³ (g)
COMPUTER SCIENCE							
GENERAL EDUCATION COURSES							
G1. Computers and Society, Issues in CS							
G2. Intro. to Software Packages							
G3. Other CS General Education Courses							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollments (see Section B).

³ Sections taught independently by GTAs.

G. Computer Science Courses (Fall 2010) (continued)

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corres- ponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Tenured or Tenure- eligible Faculty (d)	Other Full- time Faculty with/without Ph.D. (e)	Part- time Faculty (f)	Graduate Teaching Assistants ³ (g)
COMPUTER SCIENCE							
INTRODUCTORY CS COURSES							
G4. Computer Programming I (CS101 or 111) ⁴							
G5. Computer Programming II (CS102 or 112 and 113) ⁴							
G6. Discrete Structures for CS (CS105, 106, or 115) ⁴ , but not courses E20 or E28 in Section E above							
G7. All other introductory level CS courses							
INTERMEDIATE LEVEL							
G8. Algorithm Design and Analysis (CS210) ⁴							
G9. Computer Architecture (CS220, 221, or 222) ⁴							
G10. Operating Systems (CS225, 226) ⁴							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollments (see Section B).

³ Sections taught independently by GTAs.

⁴ Course numbers from CC2001.

G. Computer Science Courses (Fall 2010) (continued)

◆ Cells left blank will be interpreted as zeros.

Name of Course (or equivalent)	Total distance education enrollments ¹ (a)	Total enrollment NOT in distance education and NOT dual enrollments ² (b)	Number of sections corresponding to column (b) (c)	Of the number in column (c), how many sections are taught by:			
				Tenured or Tenure- eligible Faculty (d)	Other Full- time Faculty with/ without Ph.D. (e)	Part- time Faculty (f)	Graduate Teaching Assistants ³ (g)
COMPUTER SCIENCE							
INTERMEDIATE LEVEL CONT.							
G11. Net-centric Computing (CS230) ⁴							
G12. Programming Language Translation (CS240) ⁴							
G13. Human-Computer Interaction (CS250) ⁴							
G14. Artificial Intelligence (CS260, 261, 262) ⁴							
G15. Databases (CS270, 271) ⁴							
G16. Social and Professional Issues in Computing (CS280) ⁴							
G17. Software Development (CS290, 291, 292) ⁴							
G18. All other intermediate level CS courses							
UPPER LEVEL							
G19. All upper level CS Courses (numbered 300 or above in CC2001)							

¹ A majority of students receive the majority of their instruction via Internet, TV, correspondence courses, or other method where the instructor is NOT physically present.

² Do not include any dual enrollments (see Section B).

³ Sections taught independently by GTAs.

⁴ Course numbers from CC2001.

H. Instruction in College Algebra, Calculus and Introductory Statistics

Mathematics Questionnaire

College Algebra Instruction

H1. If course E6 (College Algebra) has non-zero enrollment, give the number of sections that:

- a. Emphasize problem solving in the modeling sense (data => model => interpretation).....
- b. Include elementary data analysis
- c. Include writing assignments
- d. Include small group activities
- e. Include small group projects.....
- f. Include class presentations
- g. Use graphing calculators.....
- h. Use spreadsheets
- i. Use online homework generating and grading packages
- j. Use classroom response systems (e.g., clickers).....
- k. Primarily use a traditional approach (sections that are basically the same College Algebra course that was taught in 1990)

Calculus Instruction

H2. Do you offer some type of Honors Calculus course that differs from your usual calculus course(s)?

- Yes..... —————> If Yes, continue with H3.
- No —————> If No, go to H5.

H3. For each level below, indicate if you offer an Honors course.

	Offer honors	Do not offer honors
a. Calculus I.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Calculus II.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Calculus III.....	<input type="checkbox"/>	<input type="checkbox"/>

H4. If you offer Honors Calculus, check all differences between Honors Calculus and regular Calculus:

The Honors Calculus Class:	Yes	No
a. Contains more theory.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Contains more applications.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Is aimed at mathematics majors.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Requires a score on some kind of test or other placement mechanism as a pre-requisite for enrollment.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Can be selected by any interested student — without a required test score or other placement mechanism.....	<input type="checkbox"/>	<input type="checkbox"/>

H. Instruction in College Algebra, Calculus and Introductory Statistics (continued)

Mathematics Questionnaire

Introductory Statistics Instruction (taught within the mathematics department):

H5a. Does your department offer an elementary statistics course for non-majors that has no calculus prerequisite?

Yes → If Yes, continue with H5b.

No → If No, go to section I.

H5b. In most sections of this course, the percentage of class sessions in which real data are used is generally approximately:

0-20%

21-40%

41-60%

61-80%

81-100%

H6. In most sections of this course, the percentage of class sessions in which in-class demonstrations and/or in-class problem solving activities/discussions generally take place is approximately:

0-20%

21-40%

41-60%

61-80%

81-100%

H7. Which, if any, of the following kinds of technology are used in a majority of the sections of this course? (Check one on each line.)

	Yes	No
a. Graphing calculators	<input type="checkbox"/>	<input type="checkbox"/>
b. Statistical packages (e.g. SAS, SPSS, Minitab)	<input type="checkbox"/>	<input type="checkbox"/>
c. Educational software.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Applets.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Spreadsheets.....	<input type="checkbox"/>	<input type="checkbox"/>
f. Web-based resources including data sources, online texts, and data analysis routines	<input type="checkbox"/>	<input type="checkbox"/>
g. Classroom response systems (e.g., clickers)	<input type="checkbox"/>	<input type="checkbox"/>

H8. Do most sections of this course require assessments beyond homework, exams, and quizzes (assessments such as projects, oral presentations, written reports)?

Yes

No

I. Undergraduate Program (Fall 2010)

Mathematics Questionnaire

If you do not offer a major in a mathematical science, check here and go to I10. Otherwise go to I1.

I1. Report the total number of your departmental majors who received their bachelor's degrees in the mathematical sciences or computer sciences from your institution between July 1, 2009 and June 30, 2010. Include joint majors and double majors¹

I2. Of the undergraduate degrees described in I1, please report the number who majored in each of the following categories. Each student should be reported only once. Include all double and joint majors¹ in your totals. Use the Other category for a major in your department who does not fit into one of the earlier categories.

Area of Major	Male	Female
a. Mathematics (including applied).....		
b. Mathematics Education.....		
c. Statistics.....		
d. Computer Science.....		
e. Actuarial Mathematics.....		
f. Joint ¹ Mathematics Majors.....		
g. Other mathematics majors.....		

¹ A "double major" is a student who completes the degree requirements of two separate majors, one in mathematics and one in another program or department. A "joint major" is a student who completes a single major in your department that integrates courses from mathematics and some other program or department and typically requires fewer credit hours than the sum of the credit hours required by the separate majors.

I3. How many different courses at your institution offered during spring 2010 or fall 2010 are team taught by a member(s) of your department and a member(s) of another department?

I. Undergraduate Program (Fall 2010) (continued)

Mathematics Questionnaire

14. Has your department taught new interdisciplinary course(s) in the last five years? (An interdisciplinary course is one in which mathematics is taught with relation to another field, such as mathematics and economics or mathematics and education.)

Yes → If Yes, continue with I5.

No → If No, go to I6.

15. If yes, give the number of new courses offered in each of the interdisciplinary areas below:

- | | |
|---|----------------------|
| a. Mathematics and finance or business | <input type="text"/> |
| b. Mathematics and biology | <input type="text"/> |
| c. Mathematics and the study of the environment | <input type="text"/> |
| d. Mathematics and engineering or the physical sciences | <input type="text"/> |
| e. Mathematics and economics | <input type="text"/> |
| f. Mathematics and social sciences other than economics | <input type="text"/> |
| g. Mathematics and education | <input type="text"/> |
| h. Mathematics and the humanities | <input type="text"/> |
| i. Other | <input type="text"/> |

16. How many different tracks (sets of graduation requirements) are there in your institution's undergraduate mathematics major?.....

I. Undergraduate Program (Fall 2010) (continued)

Mathematics Questionnaire

17. To what extent must majors in your department complete the following? Check one box in each row.

	Required of all majors	Required of some but not all majors	Not required of any major
a. Modern Algebra I.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Real Analysis I.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Modern Algebra I or Real Analysis I (majors may choose either to fulfill this requirement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A one-year upper level sequence ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. At least one computer science course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. At least one statistics course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. At least one applied mathematics course beyond course E21 (in Section E).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. A capstone experience (e.g., a senior project, a senior thesis, a senior seminar, or an internship) ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. An exit exam (written or oral).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Many departments today use a spectrum of program-assessment methods. Please indicate whether each of the following apply to your department's undergraduate program-assessment efforts during the last six years.

	Yes	No
a. We conducted a review of our undergraduate program that included one or more reviewers from outside of our institution	<input type="checkbox"/>	<input type="checkbox"/>
b. We asked graduates of our undergraduate program to comment on and suggest changes in our undergraduate program.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Other departments at our institution were invited to comment on the preparation that their students received in our courses	<input type="checkbox"/>	<input type="checkbox"/>
d. Data on our students' progress in subsequent mathematics courses were gathered and analyzed	<input type="checkbox"/>	<input type="checkbox"/>
e. We have a placement system for first-year students and we gathered and analyzed data on its effectiveness	<input type="checkbox"/>	<input type="checkbox"/>
f. Our department's program assessment activities led to changes in our undergraduate program.....	<input type="checkbox"/>	<input type="checkbox"/>

I. Undergraduate Program (Fall 2010) (continued)

Mathematics Questionnaire

19. If you offer a major in some mathematical science, please give your best estimate of the percentage of your department's graduating majors from the previous academic year (reported in I1) in each of the following categories. Please make the totals add to 100 percent.

- a. Who went into pre-college teaching %
- b. Who went to graduate school in the mathematical sciences %
- c. Who went to professional school or to graduate school outside of the mathematical sciences %
- d. Who took jobs in business, industry, government, etc. %
- e. Who had other post-graduation plans known to the department %
- f. Whose plans are not known to the department %

110. For each of the following opportunities, indicate whether or not it is available to your undergraduate mathematics students

	Yes	No
a. Honors sections of departmental courses	<input type="checkbox"/>	<input type="checkbox"/>
b. An undergraduate Mathematics Club.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Special mathematics programs to encourage women.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Special mathematics programs to encourage minorities.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Opportunities to participate in mathematics contests.....	<input type="checkbox"/>	<input type="checkbox"/>
f. Special mathematics lectures/colloquia not part of a mathematics club.....	<input type="checkbox"/>	<input type="checkbox"/>
g. Mathematics outreach opportunities in local K-12 schools.....	<input type="checkbox"/>	<input type="checkbox"/>
h. Undergraduate research opportunities in mathematics.....	<input type="checkbox"/>	<input type="checkbox"/>
i. Independent study opportunities in mathematics	<input type="checkbox"/>	<input type="checkbox"/>
j. Assigned faculty advisers in mathematics	<input type="checkbox"/>	<input type="checkbox"/>
k. Opportunity to write a senior thesis in mathematics	<input type="checkbox"/>	<input type="checkbox"/>
l. A career day for mathematics majors.....	<input type="checkbox"/>	<input type="checkbox"/>
m. Special advising about graduate school opportunities in mathematical sciences.....	<input type="checkbox"/>	<input type="checkbox"/>
n. Opportunity for an internship experience.....	<input type="checkbox"/>	<input type="checkbox"/>
o. Opportunity to participate in a senior seminar	<input type="checkbox"/>	<input type="checkbox"/>

I. Undergraduate Program (Fall 2010) (continued)

Mathematics Questionnaire

I11. Responses to this question will be used to project total enrollment in the current (2010-2011) academic year based on the pattern of your departmental enrollments in 2009-2010. Do NOT include any numbers from dual enrollment courses¹ in answering question I11.

- a. Previous fall (2009) total student enrollment in your department's undergraduate mathematics, statistics, and computer science courses (remember: do not include dual enrollment courses¹):
- b. Previous academic year (2009-2010) total enrollment in your department's undergraduate mathematics, statistics, and computer science courses, excluding dual enrollments and excluding enrollments in summer school 2010:.....
- c. Total enrollment in your department's undergraduate mathematics, statistics, and computer science courses in summer school 2010:
- d. Total enrollment in Calculus II in winter/spring term of 2010 (combine the winter and spring terms if using the quarter system):.....
- e. Total number of sections in Calculus II in winter/spring term of 2010:.....

¹ In this question, the term "dual enrollment courses" is used to mean courses taught on a high school campus, by high school teachers, for which high school students may obtain high school credit and, simultaneously, college credit through your institution.

I12.

- a. How many freshmen enrolled in your institution in fall 2010?
- b. How many of these freshmen entered this fall with AP credit for Calculus I?

J. Pre-service Teacher Education in Mathematics (continued)

Mathematics Questionnaire

Questions regarding the mathematical preparation for K-8 pre-service teachers:

- J5. Does your institution have a program of certification for pre-service K-8 teachers (i.e. a program that leads to obtaining credentials to teach mathematics in grades K-8 in public schools in your state)?

Yes..... —————> If Yes, go to J6.

No —————> If No, skip to section K (the last page).

- J6. If your institution has a program of certification for pre-service K-8 teachers, does your institution have a school or department of education that is separate from your department?

Yes..... —————> If Yes, go to J7.

No —————> If No, skip to J8.

- J7. If you answered Yes to J6, does your department offer any courses for pre-service elementary teachers that are team-taught by faculty in the Mathematics Department and the Education Department/School of your institution?

Yes.....

No

Certification requirements for pre-service “early” elementary teachers

Many institutions have different certification requirements for pre-service elementary teachers preparing for early grades and those preparing for later grades. However, there is no national agreement on which grades are “early” grades and which are “later” grades, except that grades 1 and 2 are “early” and grades 6 and above are generally “later” grades. If your institution makes no early/late distinction, regard all elementary pre-service teachers as “early” grade teachers in responding to the questions below:

- J8. How many mathematics courses (courses taught in the Mathematics Department) are required for certification as a pre-service “early” elementary teacher at your institution?

Number of mathematics courses required.....

- J9. How many specialized courses on methods of teaching mathematics (i.e., mathematics pedagogy) are required for certification as a pre-service “early” elementary teacher? How many of these courses are taught in the Mathematics Department?

a. Number of methods courses required

b. Number taught in the Mathematics Department

J. Pre-service Teacher Education in Mathematics (continued)

Mathematics Questionnaire

Questions regarding the mathematical preparation of all early pre-service mathematics teachers:

J10. In which (if any) of the following core areas below does your department offer courses specifically designed for pre-service mathematics elementary teachers (courses specifically designed to provide pre-service mathematics teachers preparation for teaching mathematics in elementary schools):

	Yes	No
a. Numbers/Operations.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Algebra.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Geometry/Measurement.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Statistics/Probability.....	<input type="checkbox"/>	<input type="checkbox"/>
e. Methods of teaching elementary grades mathematics.....	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>

J11. If your department offers courses in the any of the areas in J10 above, who generally teaches these courses? (Choose the one answer that best applies.)

- Tenured/tenure-track faculty.....
- Postdocs.....
- Other full-time faculty.....
- Part-time faculty.....
- Graduate teaching assistants.....

J12. Does your institution offer a program to prepare “mathematics specialists” to teach in any elementary K-8 grades? (A “mathematics specialist” is an elementary teacher who is likely to teach only mathematics courses.)

Yes..... → If Yes, go to J13.

No..... → If No, skip to section K (the last page).

J13. If you answered Yes to J12, does your institution offer a program to prepare “mathematics specialists” to teach in the early elementary grades?

Yes.....

No.....

K. Comments and Suggestions

Mathematics Questionnaire

If you found some question(s) difficult to interpret or answer, please let us know. We welcome suggestions to improve future surveys (e.g., CBMS 2015).

Comments: _____

Thank you for completing this questionnaire. We know it was a time-consuming process and we hope that the resulting survey report, which we hope to publish in spring 2012, will be of use to you and your department.

Please keep a copy of your responses to this questionnaire in case questions arise.