

SURVEY OF PROGRAMS IN MATHEMATICS  
IN  
TWO-YEAR COLLEGES

1980

General Instructions

This questionnaire should be completed by the person who is directly in charge of the mathematics program at your institution.

You are asked to report on all the mathematics courses and faculty in your institution. For some colleges this may involve courses in statistics, applied mathematics, and computers that, although mathematical in nature, are taught outside a mathematics department. Please include data on part-time and evening students and faculty as well as data on occupational and terminal programs. Include non-credit and remedial courses. Do not, however, include data concerning campuses jurisdictionally separate from yours, if such exist.

Please return completed questionnaire by 1 November 1980 to:

Conference Board of the Mathematical Sciences  
1500 Massachusetts Avenue, N.W., Suite 457-458  
Washington, D.C. 20005

\* \* \* \* \*

- I. A. Name of institution \_\_\_\_\_  
 If this two-year institution is part of a larger organization, identify this relationship: \_\_\_\_\_  
 B. Year institution was established \_\_\_\_\_  
 C. How is the mathematics program administered at your institution?  
 \_\_\_\_\_  
 \_\_\_\_\_ Mathematics department  
 \_\_\_\_\_ Mathematics and science department or division  
 \_\_\_\_\_ No departmental structure  
 \_\_\_\_\_ Other (specify): \_\_\_\_\_  
 II. Institutional enrollment (approximate):

	College-Transfer Program		Occupational/Technical	
	Full-time	Part-time	Full-time	Part-time
Freshman				
Sophomores				
Unclassified or other				
Total				

III. Courses in the Mathematical Sciences

Instructions for preparing table on this and the following page.

- A. The courses in column (1) in the following table are listed with typical course titles (which may not necessarily coincide with the titles you use). They are listed in approximate "catalogue order", beginning with remedial and freshman courses. Additional blank spaces are provided to permit you to write in names of courses which do not fit reasonably under some listed title.
- For the purpose of this survey, consider as a single course, instruction in a particular area of mathematics which you offer as a sequence of two or more parts (e.g., calculus).
- B. For each course in column (1) that is offered, write in column (2) the total number of students who enrolled in (any part of) the course in the fall term of 1980.
- C. In column (3) give the total number of sections of the course.
- D. In column (4) give the total number of sections of this course taught by part-time faculty.
- E. In column (5) give the total number of sections of this course for which a hand calculator is recommended.
- F. In column (6) give the total number of sections of this course in which computer homework assignments are given.

Name of Course (or equivalent)	Total No. of Students Enrolled Fall 1980	Total No. of Sections	No. Sect. Taught by		No. Sect./ Computer Assignments Recommended are Given
			Part-time Faculty	Hand Calc.	
(1)	(2)	(3)	(4)	(5)	(6)
1. Arithmetic					
2. High School Geometry					
3. Elementary Algebra (High School)					
4. Intermediate Algebra (High School)					
5. College Algebra					
6. Trigonometry					
7. College Algebra and Trigonometry, combined					
8. Elem. Functions					
9. Math. for Liberal Arts					
10. General Mathematics (basic skills, operations)					

IV. To what extent are courses in mathematics taught in division or departments of your institution other than that division or department having primary responsibility for mathematics? If your institution does not have a departmental or divisional structure, consider the group of all mathematics professors to be the "mathematics department" for the purpose of this question. Enter in the relevant boxes an estimate of the total course enrollments for the year. Please consult schedules to give good estimates of numbers of enrollments.

Courses	Enrollment in courses given by division specializing in:				Other (Specify)
	Natural Sciences	Occupational Programs	Business	Social Sciences	
1. Arithmetic					
2. Business Mathematics					
3. Statistics/Probability					
4. Pre-calculus					
5. Calculus or College Math.					
6. Computer Science & Programming					
7. Technical Math.					
8. Other: Specify					

V. Questions on Mathematics Faculty

A. Full-time faculty: indicate the numbers of full-time mathematical sciences faculty members in your department in the table below, according to their highest degrees and subject fields in which these were earned:

Highest degree	In math.	In stat.	In computer science	In math. ed.	In another field (specify)
Ph.D.					
Ed.D.					
Dr. Arts					
Master's degree, plus 1 year					
Master's degree					
Master's degree (spec. program) e.g., MAT, MST					
Bachelor's degree					

Name of Course (or equivalent)	Total No. of Students Enrolled			No. Sect. Taught by Part-time Faculty	No. Sect. Hand Calc. Required	No. Sect. Computer Assignments Given
	(2)	(3)	(4)			
11. Finite Mathematics						
12. Mathematics of Finance						
13. Business Mathematics						
14. Math. for Elementary School Teachers						
15. Technical Mathematics						
16. Technical Mathematics (calculus level)						
17. Analytic Geometry						
18. Analytic Geometry and Calculus						
19. Calculus (math., phys. & eng. sciences)						
20. Calculus (bio., soc. & mgt. sciences)						
21. Differential Equations						
22. Linear Algebra						
23. Diff. Equations & Linear Algebra						
24. Elementary Statistics						
25. Probability (and statistics)						
26. Programming of Digital Computers						
27. Other Computer Science Courses						
28. Use of Hand Calculators						
29. Slide Rule						
30. Other: Specify						

B. Do you have part-time faculty other than graduate students?        yes        no. VII. Instructional Formats  
 If yes, indicate in the table below the numbers by highest degrees and subject fields:

Highest degree	In math.	In stat.	In computer science	In math. ed.	In another field (specify)
Ph.D.					
Ed.D.					
Dr. Arts					
Master's degree, plus 1 year					
Master's degree					
Master's degree (spec. program) e.g., MAT, MST					
Bachelor's degree					

C. What is the expected (or typical) teaching load in classroom contact hours for members of you full-time faculty?           

D. How many full-time faculty teach overloads?           

E. What is the average overload (in contact hours) for those faculty?           

F. What is the average teaching load in contact hours of part-time faculty?           

G. Of your part-time staff, how many were:

Employed Full-time in			Not Employed Full-time Anywhere		Total No. of Part-time Faculty
High School	Two-year College	Four-year College	Industry or Other		
a	b	c	d	e	t

NOTE: You should have  $t = a + b + c + d + e$ .

VI. Use of Computers and Calculators

A. Does your department have access to a computer or to computer terminal facilities?            yes            no

B. How many of your full-time faculty know a computer language?           

C. How many of your full-time faculty give class assignments involving the use of the computer each year (in courses other than computer sciences)?           

VII. Instructional Formats

A. In our 1975-76 Survey, the following formats were reported to be in use. At your institution, please indicate the extent to which these formats are employed. Place a check under one of (a) and a check under one of (b).

	(a) Is not Being Used	(a) Is used by Some Faculty	(a) Is used by a Substantially Larger % of Faculty than it was Five Years ago	(b) Is used by the Same % of Faculty as it was Five Years ago	(b) Is used by Substantially Smaller % of Faculty than it was Five Years ago
1. Standard lecture - recitation system (Class size <40)					
2. Large lecture classes (>40) with recitation sections					
3. Large lecture classes (>40) with no recitation					
4. Organized program of independent study					
5. Courses by television (closed-circuit or broadcast)					
6. Courses by film					
7. Courses by programmed instruction					
8. Courses by computer-assisted instruction (CAI)					
9. Modules					
10. Audio-tutorial					
11. PSI (Personalized Systems of Instruction)					
12. Other -- Specify					

- B. 1. Does your institution operate a math lab or math help (tutorial) center? \_\_\_\_\_ yes \_\_\_\_\_ no  
(If you answered yes in 1, go on to 2 and 3.)
2. Year math lab was established \_\_\_\_\_
3. Personnel of the math lab are (check all pertinent categories):  
 \_\_\_\_\_ Full-time members of the Mathematics staff  
 \_\_\_\_\_ Part-time members of the Mathematics staff  
 \_\_\_\_\_ Members of another department  
 \_\_\_\_\_ Other: please specify \_\_\_\_\_
4. Importance of Math Labs  
 On the following scale please circle the number which best indicates your perception of the value of your math lab in promoting the mathematics program at your institution.
- |             |   |               |   |                |
|-------------|---|---------------|---|----------------|
| 1           | 2 | 3             | 4 | 5              |
| Of no value |   | Of some value |   | Of great value |

4. Are there other coordination activities involving your mathematics staff and mathematics departments of four-year colleges or universities in your area? \_\_\_\_\_ yes \_\_\_\_\_ no  
 If yes, please describe these: \_\_\_\_\_

IX. Faculty Employment and Mobility

- A. Were any of your full-time faculty members first employed on a full-time basis this year? \_\_\_\_\_ yes \_\_\_\_\_ no. If yes, how many were during the previous year 1979-80:
- |   |                  |                      |          |
|---|------------------|----------------------|----------|
| 1. enrolled in graduate school                | Doctorate (math) | Doctorate (math ed.) | Master's |
| 2. teaching in a 4-year college or university |                  |                      |          |
| 3. teaching in another 2-year institution     |                  |                      |          |
| 4. teaching in a secondary school             |                  |                      |          |
| 5. employed by you part-time                  |                  |                      |          |
| 6. employed in non-academic positions         |                  |                      |          |
| 7. otherwise occupied; specify:               |                  |                      |          |

VIII. Coordination of programs:

- A. Coordination with vocational/technical departments:  
 How often does your math staff consult with the voc./tech. departments on development and/or coordination of offerings?
- |              |        |                         |
|--------------|--------|-------------------------|
| Infrequently | Yearly | More Than Once Per Year |
| _____        | _____  | _____                   |
1. Are your course offerings and/or curriculum subject to state control or approval? \_\_\_\_\_ yes \_\_\_\_\_ no
2. Is there official state-wide coordination of your mathematical offerings with those of four-year institutions? \_\_\_\_\_ yes \_\_\_\_\_ no
3. How often does your mathematics staff consult with the mathematics department of four-year colleges on course offerings designed for transfer credit?
- |                       |        |                         |
|-----------------------|--------|-------------------------|
| Less Than Once a Year | Yearly | More Than Once Per Year |
| _____                 | _____  | _____                   |

- B. Of the full-time faculty last year, who are no longer part of your full-time faculty, how many:

1. died, or retired	Doctorate (math)	Doctorate (math ed.)	Master's
2. are teaching in a 4-year college or univ.			
3. are teaching in a two-year institution			
4. left for a non-academic position			
5. returned to graduate school			
6. left for secondary school teaching			
7. are otherwise occupied; specify:			

8. number of your full-time faculty members who received doctorates between 1979 and 1980 in math \_\_\_\_\_ in math ed. \_\_\_\_\_ other \_\_\_\_\_ ?

- C. 1. Do you anticipate changes in the number of of mathematics faculty for the coming year? \_\_\_\_\_ yes \_\_\_\_\_ no  
 If yes, please briefly indicate change and reason for it: \_\_\_\_\_
2. Do you anticipate a change in mathematics enrollments for the coming year? \_\_\_\_\_ yes \_\_\_\_\_ no  
 If yes, please briefly indicate change and reason for it: \_\_\_\_\_

X. Age, Sex and Ethnic Group of Full-time Faculty

A. Record the number of full-time faculty members in each category:

Age	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60 & Over
Bachelors								
Masters								
Doctors								
Men								
Women								
Caucasian								
Asian								
Hispanic								
Black								
Amerindian								

XI. Professional Activities

A. Memberships: for each organization listed, indicate the number of full-time members of your department who belong to:

MAA	AMATYC (State Affiliate)	NCTM	AMS	SIAM	City Org.	State Org.	Other

B. Estimate the number of full-time members of your department who

1. attend at least one mathematics conference per year
2. take additional graduate mathematics courses during the year or summer
3. give talks on mathematics at conferences
4. give talks on mathematics education at conferences
5. regularly read journal articles on mathematics
6. regularly read journal articles on mathematics education
7. write journal articles on mathematics
8. write journal articles on mathematics education
9. write textbooks

XII. Problems of the 80's

Below are some commonly cited problems of some two-year college faculty. Rate each of these problems as follows:

- A. This has been a major and continuing problem for me.
- B. This is a minor irritant.
- C. This is no problem for me.

1. Losing faculty to industry
2. Dealing with remediation

3. Increasing class sizes
4. Increasing teaching loads
5. Maintaining academic standards
6. Continuing education of faculty
7. Maintaining momentum of faculty
8. Holding part-time component in check
9. Coordinating and/or developing math for vocational/technical programs
10. Coordinating math courses with four-year colleges and universities
11. Other: Specify \_\_\_\_\_

Information supplied by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Area \_\_\_\_\_ Number \_\_\_\_\_ Extension \_\_\_\_\_

1. How long have you been in charge of the mathematics program? \_\_\_\_\_ years
2. Is chairmanship rotating? \_\_\_\_\_ yes \_\_\_\_\_ no
3. If you have found any of the above survey questions difficult to interpret or to secure data for, please supply elucidating comments or suggestions which would be helpful to the Committee in future surveys: