

Characteristics of Successful Programs in College Calculus - Instructor Start

Your college or university has been selected to be part of a national survey of calculus instruction across the United States. This research project is conducted by the Mathematical Association of America. Your answers are important to help us determine the background and experience of those who teach calculus and to give us a picture of what calculus instructors intend to do in their classes. At the end of this term, you will be asked to report the grade distribution in your class and to reflect on the degree to which your class was successful.

It is important that as many students as possible respond to the student survey. We urge you to convey this message to your students, making it clear that the purpose of these surveys is to provide information that may be useful for improving calculus instruction for all students across the United States.

All information that you submit will be held in complete confidence and your participation is voluntary. A summary of the information about the students, aggregated across all sections of calculus will be provided to the chair of the mathematics department, but no information about instructors, either individually or in aggregate, will be reported to anyone at your institution. By continuing on to complete the survey you consent to participate in this study.

If you have any questions about this project, please call Olga Dixon at (202)-319-8498 or via e-mail odixon@maa.org.

1. Your current position is best described as:

Tenure track faculty (Assistant Professor)

Tenured faculty (Associate or Full Professor)

Other full time faculty

Part time faculty

Graduate teaching assistant

Other (please specify):

2. What best describes your office space?

private office

shared office space with own individual desk

a desk shared with one other person

a desk shared with more than one other person

no office space

Characteristics of Successful Programs in College Calculus - Instructor Start

3. Indicate the number times that you have taught Calculus I in the past five years, including your current teaching assignment (*count more than one section in any given term as only one time*):

1

2-4

5-10

more than 10

4. How would you describe your teaching of Calculus I?

Very innovative

Somewhat
innovative

Somewhat
traditional

Very traditional

5. From your point of view, how supportive is your department for implementing innovative approaches to teaching Calculus I?

Not supportive

Somewhat supportive

Moderately supportive

Very supportive

6. From your point of view, how successful is your department in creating an environment in which Calculus I students feel they are personally and academically connected to other students studying Calculus I?

No effort made

Not successful

Somewhat successful

Moderately successful

Very successful

7. The Calculus I textbook you use is:

A common textbook selected by the department

A textbook I chose from an approved list

A textbook of my own choosing

Other (please specify):

Characteristics of Successful Programs in College Calculus - Instructor Start

8. What textbook is required for your Calculus I course? Select from the list below or specify a different text if your book is not on the list.

Note the distinction between "Early Transcendentals" and standard editions. No distinction is made between single-variable and combined single- and multivariable volumes.

Anton/Bivens/Davis - Calculus

Smith/Minton - Calculus

Anton/Bivens/Davis - Calculus: Early Transcendentals

Smith/Minton - Calculus: Concepts and Connections

Blank/Krantz - Calculus

Smith/Minton - Calculus: Early Transcendentals

Edwards/Penney - Calculus: Early Transcendentals

Stewart - Calculus

Hass/Weir/Thomas - University Calculus

Stewart - Calculus: Concepts and Contexts

Hass/Weir/Thomas - University Calculus: ALternate Edition

Stewart - Calculus: Early Transcendentals

Hass/Weir/Thomas - University Calculus: Elements with Early Transcendentals

Stewart - Essential Calculus

Hughes Hallett et al. - Calculus

Stewart - Essential Calculus: Early Transcendentals

Larson/Edwards - Calculus

Swokowski - Calculus

Larson/Hostetler/Edwards - Calculus: Early Transcendentals

Thomas/Weir/Hass/Giordano - Thomas' Calculus

Larson/Hostetler/Edwards - Essential Calculus

Thomas/Weir/Hass/Giordano - Thomas' Calculus: Early Transcendentals

Rogawski - Calculus

Varberg/Purcell/Rigdon - Calculus

Rogawski - Calculus: Early Transcendentals

Varberg/Purcell/Rigdon - Calculus: Early Transcendentals

Salas/Hille/Etgen - Calculus

Other (please specify Title and Author(s)):

9. How long has your current text, including earlier editions, been used on your campus?

- 4 years or less 5 - 10 years more than 10 years don't know

10. What will be the primary means of instructing students?

- face-to-face in a classroom
- online via distance learning
- hybrid between face-to-face and online distance learning

11. What technology do you permit (but not require) students to use on exams?

- Technology not permitted
- Graphing calculators that do not perform symbolic algebra
- Graphing calculators that perform symbolic algebra
- Computer algebra system (Maple, Mathematica, MATLAB, etc)
- Other (please describe):

12. What technology do you require students to use on exams?

- Technology not required
- Graphing calculators that do not perform symbolic algebra
- Graphing calculators that perform symbolic algebra
- Computer algebra system (Maple, Mathematica, MATLAB, etc)
- Other (please describe):

13. Approximately what percentage of students currently enrolled in your Calculus I course do you expect are academically prepared for the course?

- more than 80%
- between 60 and 80%
- between 40 and 60%
- between 20 and 40%
- less than 20%

14. Estimate the percentage of students currently enrolled in your Calculus I course that will:

- % withdraw
- % receive a grade of D or F
- % receive a grade of C or better

15. From your perspective, how strongly does your Institution encourage and support the scholarship of teaching and learning (defined as systematic reflection on teaching and learning)?

- Not at all
- Somewhat
- Moderate
- Very strong

16. From your perspective, how strongly does your Department encourage and support the scholarship of teaching and learning?

- Not at all
- Somewhat
- Moderate
- Very strong

17. From your perspective, how valued by your colleagues is the scholarship of teaching and learning?

Not valued
 Somewhat valued
 Moderately valued
 Very valued

18. How strong is your interest in:

	Not at all	Mildly strong	Moderately strong	Very strong
teaching Calculus I?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
teaching more advanced math classes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
participating in activities that raise your awareness of how students learn key ideas in calculus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
improving your own teaching?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
actively recruiting math majors?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Characteristics of Successful Programs in College Calculus - Instructor Start

19. Please select the appropriate response below:

	memorize it the way it was presented	1	2	3	4	5	6	make sense of the material so that they understand it
When studying Calculus I in a textbook or in course materials, students tend to:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

20. Please select the appropriate response below:

	a natural part of solving the problem	1	2	3	4	5	6	an indication of their weakness in mathematics
From your perspective, when students make unsuccessful attempts when solving a Calculus I problem, it is:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

21. Please select the appropriate response below:

	solve specific kinds of problems	1	2	3	4	5	6	make connections and form logical arguments
From your perspective, student's success in Calculus I PRIMARILY relies on their ability to:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

22. Please select the appropriate response below:

	understand underlying mathematical ideas	1	2	3	4	5	6	find answers to problems
From your perspective, in solving Calculus I problems, graphing calculators or computers help students:		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Characteristics of Successful Programs in College Calculus - Instructor Start

23. Please select the appropriate response below:

work problems
so students know
how to do them

1

2

3

4

5

help students learn

to reason through
problems on their

own

6

My primary role as a
Calculus instructor is to:

24. In my teaching of Calculus I, I intend to show students how mathematics is relevant.

Strongly Disagree
 Disagree
 Mildly Disagree
 Mildly Agree
 Agree
 Strongly Agree

25. When I prepare to teach a challenging idea in Calculus I,

	Never	Occasionally	Frequently	Always
I break the idea down into subskills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look for application problems to motivate the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I discuss with colleagues the difficulties that students have with the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use pre-assessments in the current class in order to inform how I will teach the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look for ways to use technology to illustrate the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I follow how the textbook develops the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look to alternate sources for different ways to teach the idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Does your Calculus I course have recitation sections taught by teaching assistants (TA's)?

Yes
 No

BACKGROUND INFORMATION

27. Gender

Male

Female

28. Age:

29. Race:

American Indian or Alaskan Native

Asian

Black or African American

Native Hawaiian or Pacific Islander

White/Caucasian

Other (please specify):

30. Ethnicity:

Hispanic or Latino

Not Hispanic or Latino

31. Highest degree attained:

PhD

EdD

Masters

Bachelors

32. Year highest degree obtained (YYYY):

33. Country in which undergraduate degree was obtained:

Country

Select from dropdown list >

34. Country in which highest degree was obtained:

Country

Select from dropdown list >

35. Highest degree field of study:

Mathematics

Applied Mathematics

Statistics

Mathematics Education

Other: