

**Singapore Mathematics Summer Content Institute  
Introduces a New Course Offering:**

**Geometry and Measurement**

Each day we will cover the mathematics behind the geometry taught in a K-8 classroom as well as activities that can be taken back to the teacher's classroom

**Examples of Geometry Activities:**

Demonstrate the relationship of the area of a circle and the surface area of a sphere by peeling an orange of radius  $r$  and filling up four circles of radius  $r$  with the peels.

Demonstrate the fact that the measure of an exterior angle of a triangle is equal to the sum of the two opposite interior angles by cutting up cardstock triangles.

**This course is a follow up to the Singapore  
Mathematics Summer Content Institute on  
Number and Operations**

Students can register for this course without having taken the Number and Operations course

**Worcester State College  
July 20-24, 2009 8:00 AM – 3:00 PM**

**Singapore Mathematics Summer Content Institute: Geometry and Measurement**  
**Worcester State College**  
**July 20-24, 2009 8:00 AM – 3:00 PM**

Students in Singapore have the highest mathematics scores at the 4<sup>th</sup> and 8<sup>th</sup> grade levels in the latest Trends in International Mathematics and Science Study (TIMSS). The National Math Panel called Singapore a “world leader in mathematics achievement”. Part of the reason is the approach taken in their elementary and middle school math textbooks. As the preface to *New Elementary Mathematics, Syllabus D* states, “Throughout the textbook series, emphasis is placed on the development of better understanding of mathematical concepts and their applications, as well as on proficiency in problem solving, mathematical reasoning, and higher order thinking.” The curriculum is consistent with the new NCTM focal points.

The primary goal of this institute is to deepen your understanding of the math you teach, regardless of whether you plan to use these books as your primary texts. Strengthening your understanding will help you become more effective as a teacher. The course will focus on teaching mathematically valid yet grade appropriate explanations for many fundamental elementary results in geometry and measurement. Key topics include derivation of angle facts, use of angle facts to solve unknown angle problems, geometric construction with compass and straightedge, congruence and basic proof, the Pythagorean Theorem with applications, similar triangles with applications, and the derivation of area, surface area, and volume formulas. Each day will consist of a combination of lecture and group work. The program will provide a supportive, yet challenging environment for professionals working together.

While this course is a follow up to the Singapore Mathematics Summer Content Institute on Number and Operations, students can register for this course without having taken the Number and Operations course. The instructors are Professors Mary Fowler and Mike Winders, who have both worked extensively with K-8 teachers over the past few years. Each has taught the Geometry and Measurement for Teachers course which is required for pre-service elementary teachers at Worcester State College.

Participants will receive the Parker/Baldrige textbook “Elementary Geometry for Teachers” and copies of the 3B, 4A, 5A, 5B, and 6B Singapore student texts, as well as a copy of “New Elementary Mathematics, Syllabus D, which is the textbook used in Singapore in seventh grade. The program cost also includes a continental breakfast and lunch each day. Rooms in suites in our new residence hall are available for an additional fee of \$25 per night plus a linen fee. All suites have their own bathrooms and showers.

The cost for the five day program is \$725.00 if you register by May 30 and \$825.00 if you register between May 30 and June 30. The registration form is attached, and any questions may be directed to Marie Velez at 508-929-8912 or [mvelez@worchester.edu](mailto:mvelez@worchester.edu).

\*Please note: The institute will not run if less than 20 participants register, so please tell your friends and colleagues!





**OFFICE OF RESIDENCE LIFE AND HOUSING  
CONFERENCE HOUSING REQUEST  
Summer 2009**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Permanent Mailing Address: \_\_\_\_\_ P.O. Box: \_\_\_\_\_  
Street

\_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip Code

Home Telephone #: \_\_\_\_\_ Alternative # (Cell): \_\_\_\_\_

I am requesting to stay on campus for the following workshop: **Singapore Mathematics**  
**Summer Content Institute: July 20-24, 2009**

Please check the following nights that you will be staying:  S  M  T  W  TH

The total housing cost for Sunday, July 19 – Thursday, July 23 is **\$145.00**. This price includes linens and towels for the week. (\$25/per night plus \$20 linen fee)

Most rooms are part of suites containing two singles and two doubles.

I prefer a single room \_\_\_\_\_ a double room \_\_\_\_\_

I would like to room with the following person(s): \_\_\_\_\_

Any additional information or requests:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Applicant Signature

\_\_\_\_\_  
Date