The RUTGERS YOUNG SCHOLARS PROGRAM
in DISCRETE MATHEMATICS

July 9 - August 3, 2007

“Our Eighteenth Summer”

"We're looking for students who are interested in math. Is that you?"
Do you ...

... like to work on challenging and puzzling problems
... like to look at a problem in many different ways
... get involved, make conjectures, and take risks
... enjoy the critical exchange of ideas with other students
... look forward to living in the math world for a month
... enjoy and feel compelled to do mathematics
... thrive on complexity and problems which have more than one answer
... like to reason out problems and play with concepts
... learn new material quickly and apply this learning to new situations
... concentrate on something you like for a long period of time

Then this program is for you. Here is your opportunity to ...

... experiment with some interesting mathematical problems
... spend four weeks on a college campus doing mathematics with people like yourself
... meet a variety of professional mathematicians and learn about what they do

Come to the Rutgers Young Scholars Program ...

... come join 30 high school students who share your fascination with mathematics.
... attend a variety of mathematical programs and activities ... including sessions on discrete mathematics, discussions, hands-on computer activities, and field trips.
... learn about careers in the mathematical sciences; these programs will involve industrial as well as academic mathematicians.

The instructional staff includes well-known mathematicians. Teaching assistants who are graduate and undergraduate Rutgers students majoring in mathematics or computer science provide additional academic support. You will spend a lot of time with this staff; we hope that as a result you will understand what mathematicians do and why.

The focus of the program will be discrete mathematics, although the program will not be conducted like a course. Success will be measured in terms of your enthusiasm for the subject, not by the amount of material covered.

Your daily schedule will be full and will include various recreational and social activities.

Remember, this will be an intensive program. We will expect you to participate actively in all of the activities. It will be fun and exciting, but it will require your concentrated effort. Be sure that you want to make this commitment!
COMPLETING APPLICATION MATERIALS

A completed application includes all of the following:

1. **TYPED OR PRINTED** (in black ink) responses to the questions on the Student Application Form;

2. a completed parent signature form;

3. a completed financial assistance form if applying for financial assistance;

4. a letter of recommendation from your teacher, who should mail the recommendation directly to our office, as well as a copy of your transcript of your high school record;

5. you will also be expected to submit your solutions to the 2007 Problems to Explore (partial or complete). Please make sure to **show all work** when working on your solutions and send that in with your solutions. We recommend that you make a photocopy of your solutions prior to sending them in for safe-keeping and also in case we call to discuss your responses.

MAILING INSTRUCTIONS

Please send the completed forms via First Class Mail. Because of the various weights of the enclosures, it would be wise to verify the correct postage to assure prompt delivery.

Applications will be reviewed on a first-come first-serve basis until the program is filled. All materials should be returned to the following address **as soon as possible**.

**RETURN MATERIALS TO:** Rutgers University
Young Scholars Program
SERC Building, Room 225
118 Frelinghuysen Road
Piscataway, New Jersey 08854-8019
RUTGERS YOUNG SCHOLARS PROGRAM :: SUMMER 2007  STUDENT APPLICATION FORM

Student Name..................................................................................................................................................

Student Address ....................................................................Phone (     ) ......................................................

City ...................................................................................... State..............................Zip ..............................

Social Security Number ........ Date of Birth .................. Class of □ 2008 □ 2009 □ 2010

Female .... Male ....... Email Address.................................................................................................

High School .......................................................... School phone (    )...............................................

School Address............................................................................................................................................

City..................................................................................................State............................. Zip ...................

Name of Teacher who will provide the Recommendation.................................................................

List the math courses you will have completed by July:........................................................................

List the math courses you plan to take next year:..................................................................................

If you have previously attended a summer academic program, please name the program[s] and date[s]:

Optional (used for statistical purposes)
How would you best describe yourself (please check one):

☐ Native American ☐ Hispanic (including Puerto Rican)
☐ Asian or Pacific Islander (including Indian subcontinent) ☐ White, Anglo, Caucasian
☐ African American ☐ Other (Specify)

List any friends or relatives who have attended the Young Scholars Program:

Name:................................................................................................................................. Year............................

How did you learn about the program? (You may check more than one)

☐ YSP Website ☐ Parents/Relatives
☐ Teacher Recommended ☐ Former Program Student/Alumni
☐ Guidance Counselor ☐ Brochure

☐ Newspaper or Publication (name and section)... .............................................................................

☐ Summer Program Guide (name and section)... .............................................................................

☐ Other (please explain)... ..............................................................................................................
To The Candidate

Please print your name below and give this form to a parent or guardian to complete. Both parents may complete the form together, if they wish.

CANDIDATE’S NAME

To The Parent or Guardian

Your daughter/son is applying for admission to the Rutgers Young Scholars Program in Discrete Mathematics, a four-week, summer, residential program for mathematically talented high school students. The program will take place on the Rutgers University Busch Campus in Piscataway between the dates of July 9 - August 3, 2007.

The cost of the program will be $3,500; this will cover tuition, materials, meals, and lodging. A few partial scholarships are available. No student should be discouraged from applying because of financial considerations. If applying for financial assistance please complete the enclosed application form for financial assistance.

Please indicate here any special considerations (medical, physical, emotional, psychological, etc.) we should be aware of in terms of our responsibility to your child’s education and general well-being for a month. This information will be kept strictly confidential. (You may use the back side of this page if you need additional space)

Special Considerations: ________________________________________________________________

Permission

"My daughter/son has permission to attend the Rutgers Young Scholars Program for the entire four week program from July 9 - August 3, 2007"

Your Name (please print) Relationship to Candidate

Home Address

City State Zip

Daytime telephone Evening telephone

Email

Signature of parent or legal guardian____________________________________________________
RUTGERS YOUNG SCHOLARS PROGRAM :: SUMMER 2007

RECOMMENDATION FORM

INSTRUCTIONS:

On this form, please tell us about the student you are recommending for the Rutgers Young Scholars Program in Discrete Mathematics.

Include information about the student's performance (including cumulative average and PSAT/SAT scores if available) and attach a transcript of the student's high school record.

Tell us about your student's abilities and interests, about the personal characteristics that make her or him most likely to benefit from and enjoy a four-week intensive exposure to a program in the mathematical sciences. Include specific examples drawn from your own experiences with the student.

Please write your remarks on the other side of this page and continue on a separate sheet of paper. Please be sure to write your student’s full name in your recommendation.

STUDENT NAME: ____________________________________________________________

In view of this student's interest and ability in mathematics, I recommend that s/he be accepted to the Rutgers Young Scholars Program in Discrete Mathematics.

Signature of recommending teacher ____________________________________________

Name (please print) __________________________________________________________

City________________________ State________ Zip_____

School________________________ School Phone Number (     )__________________

School Address________________________________________________________________________

City________________________ State______ Zip________ Email:__________________________

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Young Scholars Program
SERC Building, Room 225
118 Frelinghuysen Road
Piscataway, New Jersey 08854-8019

The Rutgers Young Scholars Program in Discrete Mathematics is sponsored by the Rutgers University Center for Mathematics, Science, and Computer Education, which conducts the program, and the Center for Discrete Mathematics and Theoretical Computer Science [DIMACS].