

So you want to study math...

- I. Undergraduate opportunities
 - A. REUs (Research Experiences for Undergraduates)
 1. AMS and NSF have websites listing these, though they aren't necessarily up to date
 2. NSF Director's Summer Program
 3. These programs are usually 8-10 weeks, and you work on a research project individually or in a small group
 4. Competitive, but great experience
 - B. High school summer programs
 1. You can be a counselor for math programs aimed at talented high school students
 2. E.g. PROMYS, Ross Program, Math Camp
- II. Study "Abroad" (before graduation)
 - A. Domestic program
 1. MASS program at Penn State (also has attached REU)
 - B. Abroad
 1. Budapest Semesters in Mathematics
 2. Math in Moscow (this can also be done after graduation)
- III. Study Abroad (after graduation)
 - A. 1-2 year programs
 1. Part III at University of Cambridge (1 year taught masters course)
 2. ALGANT (Algebra, Geometry and Number Theory) (2 year masters program; each year spent at a different institution, of which there are many to choose from)
 3. Central European University in Budapest (2 year masters program)
 4. Fulbright opportunities
 - B. Funding for study abroad
 1. Churchill Scholarship (specifically for University of Cambridge)
 2. Gates Scholarship (specifically for University of Cambridge)
 3. Fulbright
 4. Marshall (funds two years of postgraduate study in England)
 5. Rhodes (for study in England)
 6. I believe ALGANT and CEU fund their students
 7. Math in Moscow has scholarships available
- IV. Other great things
 - A. Mathematical Institutes
 1. Park City Mathematics Institute (PCMI): 3 week summer school; topics vary each year
 2. Institute for Advanced Study (IAS) has several programs for undergraduates over the summer
 3. Mathematical Sciences Research Institute (MSRI): UP program
 4. Institute for Pure and Applied Mathematics (IPAM): RIPS summer program
 5. This isn't an institute, but the University of Nebraska hosts the IMMERSE

program every summer which prepares participants (who have just finished undergrad and are going to grad school) for qualifying exams

B. Programs specifically for women and minorities

1. Before graduation

- a) Carleton/St. Olaf Summer Math Program - for students who have completed 1-2 years of college
- b) Summer Program for Women in Math (SPWM) at George Washington University - for students who have completed 2-3 years of college
- c) Nebraska Conference for Undergraduate Women in Math - a conference devoted entirely to math research done by undergraduate women
- d) IAS Program for Women in Math - there is an undergraduate and a graduate program; topics change each year

2. After graduation

- a) EDGE program - for women minorities who have been accepted into a graduate program; prepares participants for qualifying exams in grad school
- b) Smith College Postbaccalaureate Program - for women who want to go to grad school in math who need more rigorous mathematical preparation

3. Mathematics competitions

- a) Putnam, International Mathematics Competition, lots more online

V. National Fellowships

A. NSF GRFP (National Science Foundation Graduate Research Fellowship Program)

B. NDSEG Fellowship (National Defense Science and Engineering Graduate Fellowship)

C. Hertz Fellowship

VI. Things you can do at UCLA to prepare for graduate school (Check into similar options at your school. Many of these options are widely available.)

A. Research opportunities

1. UCLA runs REUs during the summer (e.g. RIPS, Logic summer school)
2. Do individual research with a UCLA professor
3. UC LEADS - a 2-year program with research and preparation for grad school with individual faculty mentors

B. Coursework (it's good to take advanced courses, but also important to ensure that you get good grades)

1. Take honors level courses
2. Take graduate level courses
3. Speak to professors in offices and be involved in class - letters of recommendation are VERY important

C. Department Scholar's Program (it's unclear if it's better to do this or go directly to grad school if possible)

1. Consists of an additional year at UCLA where one obtains a Master's
2. Program where one takes many graduate level classes and also the UCLA graduate school preliminary exam