

A Guide to High School Programs in Science and Engineering

Tau Beta Pi, Massachusetts Beta Chapter, MIT

December 2, 2002

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Introduction

This is a guide to programs in science and engineering for high school students. All this information was collected by undergraduates at MIT, and as of December 2002 it is as accurate as we could make it. We included as many programs as we could find, but of course this is not an exhaustive list, and we encourage students to investigate further.

Some of the programs in this guide are free, some cost thousands of dollars, and some will even pay you. Some are open to everyone and some are targetted at specific geographies or groups. Some expect students to already be budding scientists or engineers with strong academic records, and others require nothing more than an interest. Most are for high school students, but a few are also for junior high and younger.

The guide is divided by geography. *National and International* refers to programs with many locations, so check for one near you. *Northeast Region* includes CT, DE, MD, NJ, NY, and PA. *Southeast Region* includes FL, KY, MS, NC, TX, and VA. *Midwest Region* includes IA, IL, IN, MI, MN, OH, and WI. Massachusetts and California get their own categories because we have the most information for these states. If your area isn't covered, sorry! Send us leads and hopefully we can expand our coverage in the future.

We hope students, parents, and guidance counselors will find this guide useful, and we appreciate your feedback.

Sincerely,
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Massachusetts Beta Chapter
tbp@mit.edu

Online version available at <http://web.mit.edu/tbp/www/highschool>

National and International

American Regions Mathematics League

Contact: <http://www.rose-hulman.edu/~rickert/ARML/>

Cost: N/A

Dates/Length: depends on competition type, during the school year

Criteria: teams must consist of high school students

Application Deadline: N/A

This competition is also designed to challenge students who enjoy mathematics to try to solve problem sets of challenging math problems with other students in their class in high school. Each team is given 45 minutes to complete the problem solutions in the Power competition. There are also team, individual, and relay competitions. Teams that do well on the first two problem sets can compete in the National competition.

BEST Robotics Competition

Contact: <http://www.bestinc.org>

Cost: N/A

Dates/Length: competitions usually in the month of November

Criteria: high school student interested in engineering

Application Deadline: N/A

The BEST program is designed to teach teamwork, problem solving, project management, and pride in task completion within the constraints of a short time period and limited physical resources. Through partnerships of participating schools with corporate sponsors, youth teams are supported by mentors who serve as positive role models for the next generation of scientists, engineers, and technologists. The goal is to demonstrate the excitement of advanced technical careers to young people who are nearing decisions on college plans. Team membership is open to all interested students, and participation is without fee to the students or the schools.

BattleBotsIQ

Contact: <http://www.battlebotsiq.com>

Cost: \$100 entrance fee to competition, plus hotel and travel costs

Dates/Length: during school year

Criteria: 12-18 years old

Application Deadline: March 15

This program is designed for high school students to learn about physics and other science concepts by building a robot to compete in a BattleBots competition for high school students. The program is run as a course in high school where teachers are trained to mentor students in the science of robotics. Teams compete in regional competitions.

Canada/USA Math Camp

Contact: <http://www.mathcamp.org/>

Cost: \$20 registration fee, about \$3000 for residential campers, about \$2000 for non-residential campers

Dates/Length: 5 weeks during the summer (July-August)

Criteria: students ages 13-18 years. Students must take a qualifying quiz to attend.

Application Deadline: April 30

Motivated students participate in a 5 week long intensive program designed to challenge thinking and math ability, along with participating in normal camp activities. Students will be introduced to many new concepts not normally covered in high school math curriculums. Mentors are students from top universities nationwide. Scholarships are available.

Center for Mathematics, Science, and Technology Camp

Contact: <http://www.mathismylife.org/IE/>

Cost: N/A

Dates/Length: Two-week sessions in the summer

Criteria: middle school (one session) or high school students (two sessions)

Application Deadline: N/A

This program is designed to introduce middle school and high school students to science and technology by offering a range of courses each year. Some past courses have included Space Medicine/Research, Fractal Geometry/Chaos, and Classical Cryptanalysis: The Science of Codebreaking. Students stay at the University of Maryland campus and participate in several activities in addition to the courses they choose to take.

First Junior Lego League Competition

Contact: <http://www.usfirst.org/jrobtcs/index.html>

Cost: \$500/team

Dates/Length: about 2 months to build robots in October/November. Local and State competitions are during the months of November-January.

Criteria: teams must consist of students ages 9-14

Application Deadline: September 30

This program is designed to introduce younger students to creative problem solving with an emphasis on science and engineering concepts. It is an introductory program for the main First Robotics competition held for high school students. Students use Lego MindStorm kits to build robots that can perform different challenges. They compete in local competitions and can advance to state competitions.

First Robotics Competition

Contact: <http://www.usfirst.org/robotics/>

Cost: Depends on event attended. Many grants and scholarships available.

Dates/Length: Regional competitions are three day events during the months of March and April. The dates depend on the region that the team will compete in. Teams work for about 6 weeks building the robots for competition.

Criteria: currently enrolled high school student

Application Deadline: December 6, 2002

This program is designed to introduce high school students to robotics and engineering concepts. The FIRST Robotics Competition challenges teams of students and their mentors to solve a common problem in a six-week timeframe using a standard "kit of parts" and a common set of rules. Teams build robots from the parts and enter them in a series of competitions. The teams compete in regional competitions and then based on that performance possibly compete in the National competition. Students can apply for scholarships from many leading colleges and universities that sponsor the competition.

International Bridge Building Competition

Contact: <http://www.iit.edu/hsbridge/database/search.cgi/:/public/index>

Cost: \$30 minimum/high school (\$3.50/kit)

Dates/Length: regional competitions in February, international competition in April.

Criteria: high school students who have won a bridge-building contest for their high school

Application Deadline: N/A

The object of this contest is to see who can design, construct and test the most efficient bridge within the specifications. Model bridges are intended to be simplified versions of real world type bridges which are designed to accept a load in any position and permit the load to travel across the entire bridge. This program is designed to encourage an interest in physics and civil engineering and to challenge students to think about the factors involved in designing a bridge.

International RoboCup competition

Contact: <http://www.robocup.org>

Cost: N/A

Dates/Length: American competition in late April, early May. International competition in July.

Criteria: high school students interested in robotics and with strong science background

Application Deadline: N/A

The RoboCup competition is designed to foster an interest in artificial intelligence, robotics and related fields. The teams design a robot that is completely autonomous, with a special theme of soccer. The robots must compete in a autonomous soccer match against other robots. Teams compete in a national competition and then can move on to the international competition, which takes place in a different country every year. Last year 188 teams from 29 countries competed in the international competition.

NASA SHARP Program

Contact: <http://www.nasasharp.com/>

Cost: students are paid a salary for participating in the program

Dates/Length: a minimum of 8 weeks over the summer

Criteria: US Citizen or Permanent Resident, minimum age 16, strong science and math background

Application Deadline: February 10

Each year, approximately 400 students will be selected to participate in NASA SHARP for a minimum of eight weeks during the summer. Some of NASA's top science professionals, while conducting cutting-edge research as well as working on state-of-the-art equipment, mentor qualified students. Students get a chance to develop many skills while participating in the program.

National Youth Science Camp

Contact: <http://www.sciencecamp.org/>

Cost: Free for participants selected to attend

Dates/Length: one month in the summer

Criteria: Two students are chosen to represent each state as delegates to the National Youth Science Camp. Delegates attend the camp the summer after they graduate from high school, and have demonstrated exceptional academic achievement, leadership in school and community activities, and a genuine interest in the sciences. The governor of each state appoints a selection coordinator who initiates a competitive process to choose two delegates and two alternates.

Application Deadline: mid-March

The National Youth Science Camp honors, rewards, and encourages excellence in science. It creates an environment where young scientists of diverse backgrounds and interests may reap maximum benefits from interaction with one another and with visiting scientists. It strives to broaden, to inspire, and to encourage a sense of thoughtful scientific leadership among future scientists, engineers, mathematicians, and health care professionals.

Space Camp

Contact: <http://www.spacecamp.com>

Cost: varies. See website.

Dates/Length: varies. See website.

Criteria: Ages 9 through adult. The only other requirement is the desire to have a great time. Tuition includes all meals, lodging, and program materials. It does not cover transportation.

Application Deadline: varies. See website.

U.S. Space Camp is a five-day program jam-packed with astronaut training for young people. Activities include simulated Space Shuttle missions, IMAX movies, training simulators (like the 1/6th Gravity Chair), rocket building and launches, scientific experiments, and lectures on the past, presents, and future of space exploration. Locations: Alabama and California.

The Mandelbrot Mathematics Competition

Contact: <http://www.mandelbrot.org/>

Cost: \$40 for registration (register by school)

Dates/Length: 4 weeks over the course of October-March

Criteria: Individual or team competition. Teams must consist of students from the same high school.

Two levels of competition based upon skill level of teams. Schools may enter teams in both categories.

Application Deadline: September

This competition is designed to challenge students in mathematics by taking a series of tests in different rounds of competition. The teams' score in one round of competition determines whether they will move on in the competition. Topics covered include algebra, geometry, trigonometry, number theory, and other topics.

The Summer Science Program

Contact: <http://www.summerscience.org>

Cost: N/A

Dates/Length: June-August

Criteria: current sophomores and juniors in high school

Application Deadline: applications available December 15

At the Summer Science Program's campus at Happy Valley School, participants obtain in-depth experience with advanced topics in the physical sciences, mathematics, and computer science through a combination of daily classes, guest speakers, field trips, and research work. They work in three-person research teams to determine the orbital elements of asteroids (minor planets in the solar system) from their own direct astronomical observations, using telescopes sited on campus.

Toshiba/NSTA ExploraVision Awards

Contact: <http://www.toshiba.com/tai/exploravision/>
Cost: N/A
Dates/Length: none
Criteria: all age levels K-12, divided into separate categories
Application Deadline: February 4

Students work in groups of two, three or four, simulating Research and Development (R&D) teams, along with a team coach and an optional mentor. Each team selects a technology, or an aspect of a technology, that is present in the home, school, and/or community or any other technology relevant to their lives. For example, they may choose something as simple as a pencil or as complex as a quantum computer. They will explore what the technology does, how it works, and how, when, and why it was invented. The students must then project into the future what that technology could be like 20 years from now. Finally, they must convey their vision to others through both a written description and five graphics simulating Web pages. Students compete in regional competitions and then the top 24 teams compete in the national competition. The prizes include up to \$10,000 savings bonds.

USA Mathematics Talent Search

Contact: <http://www.nsa.gov/programs/mepp/usamts.html>
Cost: Free
Dates/Length: Four rounds during the school year. Each round is about 1 month
Criteria: high school student interested in mathematics
Application Deadline: none

This competition is designed to challenge high school students to explore challenging topics in mathematics and is one of the ways to be considered for the US National Math Olympiad team that competes in the International Math Olympiad.

iD Tech Camps

Contact: <http://www.internaldrive.com/locations.htm>
Cost: Program specific. Announced Jan 2003.
Dates/Length: Location specific.
Criteria: no information available.
Application Deadline: see website in Jan 2003.

iD Tech Camps (InternalDrive) is nationally recognized for its premier summer technology camps for students ages 8-17. Commuting and Sleep Away Camps are held at over 30 esteemed Universities coast to coast. Stay in the dorms! Courses include: Digital Videos & Movie Production, Programming and Robotics, Multimedia & Game Creation, Web design & Graphic Arts, and Stop Motion & Animation. iD Tech Camps challenge students with innovative curriculum, provides 1 computer per student and an average of 1:6 instructor to student ratio, uses the latest and greatest technology from key corporate partners, and hosts Family Night to share in their child's learning experience.

Northeast Region

Echo Hill Outdoor School

Contact: URL: <http://www.mathandsciencecamp.com/>

Cost: \$425 with scholarships available.

Dates/Length: One week program

Criteria: For girls interested in pursuing careers in math and science.

Application Deadline: Early April 2003

Female high school students spend a week in Maryland working with female mentors in areas of science and engineering as applied to the outdoors. As the program is located on the Chesapeake Bay, students will look to solve problems associated with the setting.

Keuka College: Mindstretchers

Contact: <http://www.keuka.edu/mind>

Cost: \$300 (day program: 8am-5pm Mon-Fri), \$450 (residential program)

Dates/Length: 2002 Dates: July 7th-13th; July 14th-20th; or July 21st-27th

Criteria: ages 10-15

Application Deadline: no information available

Mindstretchers is a summer camp designed to provide academic, artistic, and athletic enrichment to children, ages 10-15. The camp offers three one-week sessions from July 7th through July 27th, with a new group of students participating each week. The camp is located beside one of New York's most beautiful Finger Lakes, Keuka Lake. Mindstretchers provides a wonderful opportunity for our campers to enrich themselves with academics as well as enjoy the summer fun our lake offers. Because of our facilities, even during inclement weather our program provides an array of stimulating activities. The Courses include Web Page Design, Creative Writing, Math Puzzlers, Tie Dying, Music, Swimming, Basketball, Boating and many other activities.

Rockefeller University: Rockefeller Science Outreach Program

Contact: <http://www.rockefeller.edu/outreach/>

Cost: The program is free and some are eligible for funding. This is a commuter program with no housing available.

Dates/Length: The formal program begins right after the July 4th holiday and goes for six to eight weeks.

Criteria: students must be at least 16 years of age.

Application Deadline: Students may apply to enter at any time during the year.

Each summer, over 200 students apply to the Student Program which matches between 50 and 60 high school juniors, seniors, and graduating seniors with scientists who mentor them in gaining laboratory research experience. We also provide students with the Edith and Francis Mulhall Achilles Memorial Fund Scientific Reading and Writing Course (STRAW), course team-taught by a scientist and a teacher. Students are

required to hand in a research report as a work-in-progress. They also give poster presentations. Each summer, students come from about 40 different schools, over half are girls and a third are disadvantaged. About ten percent become Science Talent Search semifinalists, with some becoming finalists and winners.

Summer Challenge at Miss Porter's school (CT)

Contact: <http://www.summerchallenge.org/>

Cost: \$3,500 (including tuition, room and board, TI-83 graphing calculator, course materials, and an MPS T-shirt). Limited financial aid is available.

Dates/Length: June 29 - July 26, 2003

Criteria: girls entering grades 7 to 9

Application Deadline: no information available

This month-long academic program features challenging and fun science and math activities, athletics, and field trips for girls entering grades 7 to 9. Girls come from around the United States and many foreign countries to participate in this unique program and live at Miss Porter's School in the historic town of Farmington, Connecticut. There are a number of different academic activities. In one, students will become criminologists to solve a mock crime. They will explore chemical and biological principles to analyze physical evidence found at the "crime" scene. They will use mathematics to break codes, solve logic puzzles, and apply principles of statistics and probability. Evening activities include arts and crafts, cooking, pick-up games and movies.

Summer Institute for the Gifted

Contact: <http://www.cgp-sig.com/>

Cost: \$3,175 all-inclusive cost for three week program (does not cover transportation to and from campus). Limited financial aid is available for those who demonstrate need.

Dates/Length: June 29 - July 19th, 2003 (Drew University), June 28 - July 18th, 2003, July 20th - August 9th, 2003 (Vassar University), June 28th - July 18th, July 20th - August 9th (Bryn Mawr College), July 27th - August 16th (Amherst College), July 27th - August 16th (Oberlin College).

Criteria: requires evidence of high academic ability and/or achievement (e.g. students who have scored in the 95th percentile in a nationally-normed standardized test).

Application Deadline: no information available

The Summer Institute for the Gifted provides instruction in over eighty academic, arts, and recreational courses during its regular academic schedule as well as free choice recreational activities and special evening programs Monday through Friday. On weekends, students participate in a variety of activities (off-campus trips on Saturdays, Sunday Creativity Day, Sunday Parent Visitation Day, and extended evening programs) that provide a change of pace and further enrichment specifically designed for the academically gifted student. Every student selects five courses, one of which can be a study tutorial. Each class meets five times a week for seventy-five minutes. In addition, there is a supervised tutorial session each evening.

US Coast Guard Academy: Minority Introduction to Engineering (MITE)

Contact: <http://www.cga.edu/admissions/summerprogramsforjuniors/mite.htm>

Cost: free

Dates/Length: one week summer program

Criteria: US citizen of minority heritage; physically fit; medically qualified

Application Deadline: no information available

MITE is a free, one week summer program. It is designed for minority high school students between their junior and senior year who are interested in the United States Coast Guard Academy and engineering. During MITE week, participants spend their days in classes performing engineering projects. Students rise early in the morning, exercise, and gain first hand experience on what it takes to be a cadet at the USCGA. All of this enables students to make an informed decision about applying to USCGA.

University of Delaware: Delaware Aerospace Academy

Contact: <http://www.dasef.org/>
Cost: \$225 (full-day) or \$425 (overnight)
Dates/Length: June 24-28, July 7-12, July 8-13.
Criteria: students in grades 3 to 10
Application Deadline: no information available

Celebrating over a decade of excellence with challenging, cutting edge and fun programs for students entering grades 3 thru 10. Programs in: rocketry, Mars studies, living in space, physics, simple machine, circuitry, white room experiments, math in the universe, planetary studies, astronomy, space architecture, principles of flight/design, team building, leadership and cooperative learning. This summer camp is located at the Caravel Academy and University of Delaware Campus.

University of Delaware: FAME/UNITE/MERIT Summer Camps

Contact: <http://www.ce.udel.edu/~mchite/fame/home.html>
Cost: free, other than personal expenses
Dates/Length: four week summer program
Criteria: rising high school juniors and seniors enrolled in college preparatory curriculum with grades of B or higher in math, science and English.
Application Deadline: no information available

Program seeks to increase the participation of African-American, Hispanic/Latino and Native American youth in engineering and other science professions through a four-week residential (home on weekends), academic enrichment program. Program provides a simulated college experience for participants, while supplementing students' high school curriculums. The program takes place on the University of Delaware's Newark campus starting some time in the latter part of June. Students should have an interest in the engineering, math or science related fields.

University of Maryland: Exploring Engineering(E2@UMD)

Contact: <http://www.engr.umd.edu/wie/Programs/e2@md.html>
Cost: \$150 for one week (covers all expenses except transportation to and from the University of Maryland and spending money). Full and partial scholarships are available based on financial need.
Dates/Length: July 6-12 2003 (session one), July 13-19 (session two)
Criteria: High school women in the 10th or 11th grade in the Fall of 2003.
Application Deadline: no information available

E2@UMD introduces women to engineering through hands-on activities information sessions. While living in campus dormitories, young women who are entering 11th and 12th grades, will conduct laboratory experiments and work on engineering design projects. Students attend engineering lectures, conduct laboratory experiments, take tours, and participate in a team design project that provides them with exposure to technical writing and technical presentation. In addition, students produce a complete lab report and are required to keep daily journals in which they reflect on their thoughts and feelings about their experiences in the program.

University of Rochester: Rochester Scholars

Contact: <http://www.rochester.edu/College/osp/hs/rs.html>

Cost: Cost for 2002: \$295 per course (covers course related expenses and materials); students must arrange transportation to and from campus each day.

Dates/Length: July 21-August 1 2003.

Criteria: students must be in grades 9, 10, 11 or 12 in September 2003. All students are expected to have completed any prerequisite work.

Application Deadline: no information available

Rochester Scholars is a two-week academic experience providing bright, talented, and motivated high school students the opportunity for in-depth exploration of topics in the sciences, social sciences, engineering, and humanities. The program also affords students the chance to interact with peers from area schools who have a wide range of interests and goals. Most importantly, it gives students time to test the “college experience” in a fun-filled, but challenging, setting. Students select one or two courses and remain in those courses throughout the program. Classes are held each morning from 9 a.m. to 12 p.m. and each afternoon from 1 to 4 p.m., Monday through Friday. Class sizes are small, ranging from 6 to 20 students, so students have ample opportunity for individual attention.

University of Rochester: Science Explorations Camp

Contact: http://www2.envmed.rochester.edu/envmed/ehsc/outreach/sci_exp_camp/

Cost: \$220 for one week in 2002.

Dates/Length: exact dates to be announced in early 2003

Criteria: students must be in grades 7-9 in fall 2003. Application with teacher’s recommendation is required. Each session limited to 24 students.

Application Deadline: no information available

The Science Explorations Camp offers a challenging program for middle school students (those entering grades 7 through 9 in the Fall). Campers are involved in one week of science activities exploring a central theme. There is a different theme each year. The summer 2002 theme was “Science Mysteries.” Campers used the scientific method and their problem-solving skills to solve mystery of the disappearance of Blackbeary Bear, the Life Science Learning Center mascot. In future years they will: perform detailed experiments that will help them understand how scientists solve crimes and medical mysteries; learn what evidence investigators use to support their findings; learn the latest innovations in DNA technology and their application to forensic and medical science through DNA fingerprinting; hone their forensic skills by solving a unique “crime scenarios”

Massachusetts

Boston University: The Program in Mathematics for Young Scientists (PROMYS)

Contact: [http://math.bu.edu/people/promys/
promys@math.bu.edu](http://math.bu.edu/people/promys/promys@math.bu.edu)

Cost: The cost to 2002 participants was \$1,600 including room and board.

Dates/Length: In 2002 the dates were July 7 to August 17.

Criteria: Any high school student may apply. Admissions decisions will be based on the following criteria: applicants' solutions to a set of challenging problems included with the application packet; teacher recommendations; high school transcripts; and student essays explaining their interest in the program.

Application Deadline: Admission is on a rolling basis. Applications accepted until June 1st.

PROMYS is a six-week summer program at Boston University designed to encourage motivated high school students to explore the creative world of mathematics in a supportive community of peers, counselors, research mathematicians, and visiting scientists.

Harvard Summer School

Contact: <http://www.ssp.harvard.edu/>

Cost: Application fee (nonrefundable) \$40. 4-unit course \$1,850. 8-unit course \$3,700. On-campus Room and board \$3,200. Housing prepayment \$720. \$360 of the housing prepayment is nonrefundable. Health insurance \$95.

Dates/Length: Monday, June 24 - Friday, August 16

Criteria: High School Junior or Senior

Application Deadline: Last year's deadline: Applicants must submit all parts of the Secondary School Program application and a \$40 nonrefundable application fee by May 31, 2002.

Secondary school students choose from the full array of nearly 200 Harvard Summer School courses in 45 liberal arts fields. They enroll in two 4-unit courses or one 8-unit course for a letter grade. Four-unit courses meet daily for an hour or twice weekly for two-and-one-half hours; 8-unit courses meet two or more hours each day. Many courses are taught by Harvard faculty who teach such courses to Harvard undergraduates during the academic year. Credits earned are recorded on an official Harvard transcript and are transferable toward a future undergraduate degree at most colleges and universities.

Harvard: Junior Science and Humanities Symposium

Contact: <http://www.mfdp.med.harvard.edu/k12/jshs/>

Julia Spears

Director K-12 Programs

Minority Faculty Development Program

617-432-4634

julia_spears@hms.harvard.edu

Cost: no information available
Dates/Length: two day research symposium
Criteria: High School Student
Application Deadline: no information available

JSHS provides a forum for high school students from Massachusetts and Rhode Island to present their work during a two-day research symposium held at Harvard Medical School (HMS). Winners receive a scholarship and attend a national meeting. Participants also attend HMS-affiliated hospital site visits, a career forum, presentations by scientists involved in cutting-edge research, a tour of HMS and a seminar on how to conduct research.

Harvard: Program for Research and Investigation in Science and Math (PRISM)

Contact: <http://www.mfdp.med.harvard.edu/k12/prism/>
julia_spears@hms.harvard.edu
617-432-4634

Cost: no information available

Dates/Length: three weeks in the summer.

Criteria: 8th grade Student attending Boston Public Schools (with preference given to students participating in the Mentoring for Science program); Demonstration of interest and ability in science, have an interest in pursuing a career in science and/or interested in attending college; Willingness to attend all program activities; Parental/guardian consent.

Application Deadline: no information available

The goal of the PRISM program, a three-week summer mathematics and science summer camp for rising 9th grade students who have graduated from Boston public middle schools, is to provide case-based academic, hands-on science and site visit activities that reinforce science learning and ease student transition from middle school to high school

Harvard: Project Success

Contact: http://www.mfdp.med.harvard.edu/k12/project_success/index.htm

Julia Spears
Director K-12 Programs
Minority Faculty Development Program
617-432-4634
julia_spears@hms.harvard.edu

Cost: students receive a salary

Dates/Length: Paid hands-on research positions for 8 weeks, from July through August.

Criteria: Be a high school student, particularly a student from an underrepresented racial or ethnic background and/or from a disadvantaged background. Reside in Boston or Cambridge, Massachusetts. Have completed the sophomore, junior or senior year of high school and be at least 16 years of age by June 2001. Demonstrated an interest and ability in science, interest in pursuing a biomedical science or health-related career and committed to attending college. Maintained a Grade Point Average (GPA) of at least B-, and have completed biology and algebra (completion of calculus is preferred but not required). Be willing to complete all required formal oral and written reports; attend all Project Success-sponsored seminars; and maintain good attendance and performance on required research projects. Be committed to participating in Project Success for at least one year. Have parental/guardian commitment.

Application Deadline: no information available

Project Success targets Boston and Cambridge minority high school students to participate in mentored summer research internships at Harvard Medical School and its affiliated institutions. The program is augmented by seminars and workshops given by faculty and administrators, site visits, a SAT preparation course and career guidance counseling.

Lawrence Academy Summer Programs

Contact: <http://www.lacademy.edu:82/NewWebsite/Programs.nsf/WCONTENT/WWW-53SQ29?OpenDocument>

Cost: no information available

Dates/Length: no information available

Criteria: ages 13-17

Application Deadline: no information available

Environmental Field Study teaches students ages 13-17 the principles and skills of environmental science through hands-on field study in authentic scientific investigation. You will solve real-world problems as you unravel the interrelationships between wildlife, vegetation, water, and human activity. Your fieldwork will be supported by classroom theory and by laboratory examination of the specimens you gather.

MIT: High School Studies Program (HSSP)

Contact: <http://web.mit.edu/esp/www/Pro/hssp.html>
esp@mit.edu

Cost: \$30

Dates/Length: 4-8 weeks

Criteria: High School Student

Application Deadline: Summer HSSP Registration Day will start in late June.

HSSP is the High School Studies Program, a project of the MIT Educational Studies Program. HSSP offers non-credit, enrichment courses to 7th-12th grade students on Saturdays at MIT. This program is designed to give these students a chance to take courses in a wide variety of topics. Courses cover both academic and non-academic subjects. The classes are designed to be fun and interesting for students and to offer them an opportunity to learn about something in which they're interested.

MIT: Minority Introduction to Engineering Entrepreneurship and Science

Contact: <http://web.mit.edu/mites/www/>
Massachusetts Institute of Technology
MITE2S Program
Room 1-211
77 Massachusetts Avenue
Cambridge, MA 02139
617-253-3298
mites@mit.edu

Cost: The program is 100% funded, and individuals covers all living and educational expenses for each admitted student. Students only pay for their transportation to and from MIT.

Dates/Length: no information available

Criteria: The MITE2S program is open to high school students who are US citizens or permanent residents and who are from one of the minority groups underrepresented in the engineering and science fields, namely, Native American, Hispanic American, and African American.

Application Deadline: last year's deadline was Friday February 8, 2002

MITE2S (Minority Introduction to Engineering, Entrepreneurship, and Science) is a rigorous six week residential summer program that introduces promising minority high school juniors to engineering, science, and entrepreneurship. The program also stresses the value and rewards of pursuing technical degrees and careers.

MIT: Research Science Institute (RSI)

Contact: <http://www.cee.org/rsi>

Cost: RSI is cost free to the participants.

Dates/Length: June 23 - August 3

Criteria: Talent and motivation are the only criteria for admission

Application Deadline: February 1

RSI is an intense summer program where some of the most talented high school students from the US and around the world come together to do science and mathematics. Living on the MIT campus, they do research projects under the guidance of mentors from MIT and surrounding institutions.

Phillips Academy Summer Session

Contact: <http://www.andover.edu/summersession/home.htm>
jfallon@andover.edu

Cost: Boarding - \$4400, Non-boarding - \$3400

Dates/Length: July 1st-August 6th

Criteria: The Phillips Academy Summer Session accepts academically qualified boys and girls who have completed the 8th, 9th, 10th or 11th grade.

Application Deadline: Students should apply immediately after receiving the 2003 catalog. Because we have rolling admission, there is no deadline in the usual sense of the term; however, many courses are filled by late March. It is advantageous to apply as early as possible. Decisions are made soon after applications are complete.

Fostering a passion for lifelong learning, the Summer Session combines a full boarding, precollege experience with small classes in a multicultural community. Innovative pedagogy complements traditional areas.

Phillips Academy: Math and Science for Minority Students

Contact: <http://www.andover.edu/ms2/home.htm>
ms2@andover.edu

Cost: The only possible costs to the scholars are those of transportation to and from Andover, medical insurance, and incidental expenditures for the five weeks. Financial assistance is available, in varying amounts depending on need, to cover such additional costs.

Dates/Length: All students attend nine and one-half hours each of mathematics and science every week.

Criteria: To be eligible for admission, candidates must currently be in the ninth grade in a public school and must have completed one full year of algebra by June 2003.

Application Deadline: The pre-application form and essay must be postmarked by January 6, 2003. After we receive the pre-application form and essay, the applicant will be sent an application package containing math-teacher, science-teacher and guidance-counselor recommendation forms, transcript request and Parents' Confidential Statement. The material must be completed and postmarked by February 4, 2003.

(MS)2 is a competitive math and science program for minority students who have shown strong interest in and aptitude for mathematics and science.

Smith Summer Science and Engineering Program

Contact: <http://www.smith.edu/summerprograms/ssep/>

Gail Scordilis

Clark Hall

Smith College Northampton, MA 01060

413-585-3060

gscordil@smith.edu

Cost: \$3,500

Dates/Length: June 30 to July 27, 2002

Criteria: The 2002 SSEP is open to academically talented girls who will enter grades 9, 10, 11 or 12 in fall 2002.

Application Deadline: Early admission deadline: March 1. Regular admission deadline: May 15.

A month at Smith will give you an exceptional opportunity to “do” science and engineering, will enhance your skills, boost your confidence, and connect you with professionals who will support your efforts. You also will make great new friends from all over the world.

Wilderness Exploration

Contact: <http://www.lacademy.edu:82/NewWebsite/Programs.nsf/WCONTENT/WWWW-522TFU?OpenDocument>

Cost: \$240

Dates/Length: June 24 - 28 (9AM-4PM)

Criteria: Ages 11-14

Application Deadline: none

Nature study, with daily excursions and laboratory experiments.

Midwest Region

Computer Science Summer College

Contact: <http://www.cs.iupui.edu/Extras/hsSummerCollege.html>

Department of Computer and Information Science
Indiana University-Purdue University Indianapolis
ATTN: Dayna Beaman
723 West Michigan Street, SL280
Indianapolis, IN 46202-5132
(317)274-3883 or (317)274-9727
dbeam@cs.iupui.edu

Cost: \$450.00 (additional fees if you would like to earn 3 hours of college credit)

Dates/Length: The dates for 2002 were July 8, 2002-July 26, 2002

Criteria: Applicants must be Indiana High School students prepared to begin their Junior or Senior year in the Fall of 2003. Students must have successfully completed one year of algebra, one year of geometry, and one year of a physical science.

Application Deadline: Applications will be accepted as long as space is available. Students who meet minimum admissions criteria will be admitted on a first come first serve basis. Inquire about applications as early as December 2002.

Thirty students will participate in an intensive three-week introduction to Applied Computer Science. This Summer College program will focus on dynamic Internet applications and introductory programming languages. Upon the completion of the Summer College, students will know how to design, create and publish interactive Web pages, create simple programming solutions and understand key concepts in Computer Science.

Iowa State University: Engineering and Beyond Workshop

Contact: <http://www.eng.iastate.edu/ehw/>

Engineering and Beyond Workshop Coordinator
Engineering Outreach and Recruitment
Iowa State University
112 Marston Hall
Ames, IA 50011
jlg@iastate.edu
(515) 294-8355

Cost: The cost is \$225. Financial assistance is available to students who can demonstrate need.

Dates/Length: There were 3 sessions last year. The dates were: Session I: July 7-11, 2002. Session II: July 14-18, 2002. Session III: July 21-25, 2002.

Criteria: Students completing their junior year of high school.

Application Deadline: The deadline last year was May 10, 2002

checking-out career opportunities; getting experience in engineering design; working in high-tech labs; experiencing college life for a few days; solving real engineering design problems using computer software; getting answers to: what is engineering? what do engineers do? is engineering a career for me?

Michigan Math and Science Scholars Summer Program

Contact: <http://www.math.lsa.umich.edu/mmss>

Michigan Math & Science Scholars Program
Department of Mathematics
525 E. University; 2082 East Hall
Ann Arbor, MI 48109-1109
mmss@umich.edu 734-647-4466

Cost: Commuter program is \$750 for 2 weeks, \$1500 for 4 weeks. Residential program is \$1350 for 2 weeks, \$2675 for 4 weeks

Dates/Length: Session I: June 29, 2003 to July 12, 2003. Session II: July 13, 2003 to July 26, 2003

Criteria: The application requires a grade transcript, personal statement, and teacher recommendation.

Application Deadline: Applications are accepted on a rolling basis.

Michigan Math and Science Scholars is a program for high school students and teachers who are open to the challenges of higher mathematics and natural sciences. Michigan Math and Science Scholars attend summer courses at the University of Michigan, Ann Arbor, on topics of current mathematical and scientific research. They are supported throughout the following academic year by self-paced courses run over the Internet and by mentoring from Michigan math and science faculty and graduate teaching assistants.

Michigan State University: High School Engineering Institute

Contact: <http://www.egr.msu.edu//egr/programs/bachelors/hsei.php>

High School Engineering Institute
College of Engineering
Michigan State University
East Lansing, MI 48824-1226
(517) 355-6616 ext. 1
jphodges@egr.msu.edu

Cost: \$435

Dates/Length: Sunday, July 13, 2003 through Friday, July 18, 2003.

Criteria: Students will be selected to attend based on the following criteria: 3.2 GPA or higher and strong Math/Science coursework; Completion of the tenth, but not the twelfth grade by the start of the institute; and one letter of recommendation.

Application Deadline: Candidates will be admitted on a rolling basis until May 23, or until program is full.

The High School Engineering Institute is a six-day summer residential program designed to encourage students to consider engineering as a career option. Students are exposed to eight disciplines within the field of engineering in order that they may better understand the many career pathways that are available. Participants delve into such areas as biosystems, civil, chemical, biomedical, mechanical, and electrical engineering; computer science; and materials science and mechanics. Students with interests in science and math are especially encouraged to attend. The instructional staff is composed of faculty members and graduate assistants at Michigan State University.

Michigan Technological University: Explorations In Engineering

Contact: <http://www.edopp.mtu.edu/sap/yp/eie/>

Youth Programs Office - Explorations in Engineering Workshops

Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931-1295

Cost: \$50.00

Dates/Length: Dates for 2002 were July 14-20, 2002

Criteria: This program is designed for high school freshman/sophomore/junior minority and/or economically disadvantaged men and women who are academically talented in mathematics and/or science.

Application Deadline: The deadline for 2002 was April 5, 2002

The workshop is a week-long investigation of engineering careers in areas such as mechanical, environmental, electrical, chemical, civil, geological, and metallurgical engineering, as well as other related disciplines such as mathematics, engineering technology, technical writing, and computer science. Each session includes a laboratory experience, a team engineering project, and time to interact formally and informally with role models and talented peers.

Purdue University: Exciting Discoveries for Girls in Engineering (EDGE) Summer Camp

Contact: <http://fairway.ecn.purdue.edu/wiep/>

Cost: no information available

Dates/Length: June 22-27, 2003

Criteria: This camp for girls entering their sophomore and junior years of high school.

Application Deadline: no information available

This camp for girls entering their sophomore and junior years of high school is sponsored by Delphi Automotives. It is designed to better acquaint the participant with opportunities in engineering and how their interests and talents can be utilized in this exciting career. The girls will build their own electronics device, program an experiment using Lego Investigator, and tour engineering laboratories and a production facility.

Purdue University: Seminar for Top Engineering Prospects (STEP)

Contact: https://engineering.purdue.edu/FrE/resources_for/prospective/step

Cost: no information available

Dates/Length: Sessions will be held in July 2003.

Criteria: The program is open to students who are entering their senior year in high school and are interested in investigating career possibilities in engineering. Students should have completed three years of high school mathematics and one year of chemistry or physics. In addition, students must obtain a letter of recommendation from their mathematics teacher, science teacher, or guidance counselor.

Application Deadline: no information available

The Seminar for Top Engineering Prospects (STEP) gives high school students the opportunity to explore the various engineering disciplines and job functions. As an added bonus, students will experience first-hand an example of what college life is all about. Tours, demonstrations, classroom experiences and projects are all geared toward helping students learn about engineering.

Rose Hulman Institute of Technology: Operation Catapult

Contact: <http://www.rose-hulman.edu/catapult/>

5500 Wabash Avenue, CM 1

Terra Haute, Indiana 47803

1-800-248-7448

Lisa.Olson@rose-hulman.edu

Cost: In 2002, tuition and fees for Operation Catapult were \$1,750. This cost included instruction, stay in the air-conditioned residence hall, and 20 meals per week.

Dates/Length: Last year, there were 2 sessions. The dates were: Session I: June 9, 2002 - June 28, 2002. Session II: July 7, 2002 - July 26, 2002

Criteria: To be eligible you must be a student who will enter your senior year of high school in the fall of 2003. In addition, you must have completed three years of math and one year of chemistry or physics. The scores of any standardized tests you may have taken are also required.

Application Deadline: no information available

For three weeks this summer you can work with lab and shop facilities, as well as the faculty and staff of Rose-Hulman Institute of Technology. It's the kind of thing for someone who'd rather learn to program a computer or fabricate a metal model for aerodynamic drag tests than just daydream. We call it Operation Catapult, and we invite you to join us.

Univeristy of Michigan: Camp CAEN (Computer Aided Engineering Network)

Contact: <http://campcaen.engin.umich.edu/cc2003info.php>

James Todd, Camp Coordinator
University of Michigan
2318 Media Union
2281 Bonisteel Blvd.
Ann Arbor, MI 48109
734-936-8039
campcaen@engin.umich.edu

Cost: no information available

Dates/Length: Camp CAEN 2003 is tentatively scheduled to begin on June 15th, 2003 and it will last for 2 weeks.

Criteria: Any student ages 13 - 17 with some computer experience (defined as having browsed the web before, and having written a paper using a word processor) is welcome to apply.

Application Deadline: no information available

Camp CAEN is a world-class computer and technology camp offered by the University of Michigan College of Engineering's Computer Aided Engineering Network (CAEN). Knowledgeable staff, including enthusiastic engineering student mentors, teach classes that range from programming to website design to virtual reality.

University of Cincinnati: Men in Engineering and Computer Science Summer Camp

Contact: <http://www.eng.uc.edu/prospectivestudents/summercamp/men/>

Cost: \$150

Dates/Length: June 23-27, 2003

Criteria: Must be a male entering the 11th or 12th grade in fall 2003. Should have demonstrated interest in mathematics and science. Forty student participants will be selected on a first-come, first-serve basis.

Application Deadline: Applications must be received no later than 5:00 P.M. Monday, June 9, 2003. Forty student participants will be selected on a first-come, first-serve basis.

This one week day camp will allow you to develop your creativity as well as provide you with the opportunity to meet and speak with working engineers who will allow you to see for yourself that engineers are innovative designers and problem solvers for society. In the mornings you will work with hands-on departmental projects, compete in a bridge building competition, and gain experience in working with computers facilitated by

College faculty, staff, and various hands-on activities. Tentatively, in the afternoons you will be visiting various corporate engineering plants such as: General Electric Aircraft Engines, Bayer Corporation, Procter & Gamble, and Cincinnati Bell.

University of Cincinnati: Women in Engineering and Computer Science Camp

Contact: <http://www.eng.uc.edu/prospectivestudents/summercamp/women/>
University of Cincinnati
College of Engineering
Attn: Carol Schababerle, Director, Rowe Center for Women in Engineering
653 Baldwin
Post Office Box 210018
Cincinnati, Ohio 45221-0018
513-556-0756
Rowecenter@uceng.uc.edu

Cost: \$125

Dates/Length: July 14-18, 2003

Criteria: Must be a female entering the 11th or 12th grade in fall 2002. Should have demonstrated interest in mathematics and science. Forty student participants will be selected on a first-come, first-serve basis.

Application Deadline: Applications must be received no later than 5:00 P.M. Friday, June 27, 2003.

This one week day camp will allow you to develop your creativity as well as provide you with the opportunity to meet and speak with working engineers who will allow you to see for yourself that engineers are innovative designers and problem solvers for society. In the mornings you will work with hands-on departmental projects, compete in a bridge building competition, and gain experience in working with computers facilitated by College faculty, staff, and various hands-on activities. In the afternoons you will be visiting various corporate engineering plants

University of Illinois: Exploring Your Options Summer Camp

Contact: <http://www.engr.uiuc.edu/WYSE/eyo.html>
WYSE
400 Engineering Hall
1308 West Green Street
Urbana, IL 61801
wyse@uiuc.edu
800-843-5410

Cost: The registration fee is \$550, which covers tuition, housing, meals, classes, lab materials, and all fees for camp activities.

Dates/Length: There are 3 sessions: Session I – June 15-21, 2003. Open to 2004 or 2005 grads. Session II – July 6-12, 2003. Open to 2006 grads. Session III – July 27-August 2, 2003. Open to 2004 or 2005 grads.

Criteria: If you graduate in 2004 or 2005, you are eligible to register for either session I (June 15-21, 2003) or III (July 27-August 2). If you graduate in 2006, you can register for session II (July 6-12).

The application requires a personal statement of purpose, and 2 letters of recommendation

Application Deadline: Applications will be accepted beginning March 1 and ending May 9 (postmarked May 9, 2003).

Exploring Your Options is a one-week residential program that provides students who are interested in math and science a chance to explore each of the 12 departments within the College of Engineering at the University of Illinois at Urbana-Champaign.

University of Michigan: Summer Engineering Academy

Contact: <http://www.engin.umich.edu/mepo/k-12.academy.cfm>

MEPO

Summer Engineering Academy

1463 Robert H. Lurie Engineering Center

1221 Beal Avenue

Ann Arbor, MI 48109-2102

734-647-7120

Cost: No information available

Dates/Length: Programs vary from one to eight weeks in length

Criteria: The application requires a grade transcript, personal statement, and teacher recommendation. The program accommodates grades 7 through incoming engineering freshman; for the latter group, internship opportunities are available.

Application Deadline: In 2002, all application materials were to be postmarked by March 31, 2002

SEA targets 300 students each summer who spend one to eight weeks on campus in pre-college initiatives that include: daily classes in mathematics, computers, and technical communications; exposure to engineering careers; industry tours; academic and personal skill development; information on preparing for college; and networking opportunities with CoE students, faculty, and staff.

University of Minnesota: Summer Explorations in Science, Engineering, and Mathematics (SESEM)

Contact: <http://www.cce.umn.edu/summer/programs/students/students.html#SESEM>

Cost: \$3,200

Dates/Length: The dates from last summer were July 7-August 9, 2002

Criteria: Students entering grades 10-12 in fall 2003. Students must have successfully completed high school level algebra, geometry, precalculus, advanced algebra, and trigonometry courses. Students should also possess reasonable mathematical maturity and excellent academic skills.

Application Deadline: no information available

Participants will be enrolled in a three-credit University level calculus course that focuses on single-variable differentiation and integration. Active learning is required for this intense, challenging course that emphasizes group work, directed tutorials, homework, lecture presentations, and examinations. Students will be engaged in workshops and seminars that emphasize opportunities and applications created by faculty leaders in science and engineering. The mathematics of motion and transportation, forensics, cryptosystems, C++ and Java, astronomy, physics, chemical engineering, computer science/electrical engineering, and geology are some of the 2002 topics. Residential only.

University of Wisconsin: Engineering Summer Program (ESP)

Contact: <http://studentservices.engr.wisc.edu/diversity/esp/>

Gwen L. Ebert

Diversity Affairs Office

2640 Engineering Hall

1415 Engineering Drive

Madison, WI 53706-1691

608-262-9564

gebert@engr.wisc.edu

Cost: no information available

Dates/Length: The dates for 2002 were June 17, 2002 - August 3, 2002.

Criteria: ESP is open to traditionally underrepresented groups (women, African Americans, Hispanic Americans, Native Americans and Southeast Asian Americans) who are interested in pursuing a career in science and engineering. Students who are high school sophomores and juniors may apply. Participants must be U. S. citizens or permanent residents. You must have a minimum high school grade point average of 3.0, on a 4.0 scale, and currently be a high school sophomore or junior who will have completed at least one year each of algebra, geometry, and chemistry by June 2003.

Application Deadline: The deadline for 2002 was April 9, 2002.

ESP is a seven-week residential summer program that gives high school students of color and women an opportunity to explore engineering careers while preparing for college-level study. ESP provides you with an opportunity to take college-preparatory courses in math, science and engineering. Courses are taught in UW classrooms and laboratories. Professors and instructors selected to teach ESP courses are especially sensitive to the needs of high school students of color and women. While participating in ESP you will eat in a UW-Madison cafeteria and live in a campus residence hall. Program counselors also live in the dormitories, supervising and advising students on academic and career options.

Southeast Region

Duke University Talent Identification Program

Contact: <http://www.tip.duke.edu/>

Cost: Cost ranges from \$1,550 to \$2,700 depending on program, with financial aid readily available.

Dates/Length: no information available

Criteria: Students in grades 9 - 12 are eligible for various programs under the umbrella TIP program.

Application Deadline: no information available

Classes and seminars taught by Duke faculty, designed to challenge gifted high school students who show high aptitude for various fields, including science, math, and engineering.

Hollins University: Hollinsummer

Contact: <http://www.hollins.edu/specprog/hollinsummer/holsum.htm>

Cost: \$1,000

Dates/Length: July 6 - 18 2003

Criteria: girls in grades 9-11

Application Deadline: June 1, 2003

Although many disciplines are available, courses are offered in pre-medical sciences as well as psychology and neurosciences. Students will take two courses over two weeks, and be mentored by female academics.

Meredith College: Math Week

Contact: <http://www.meredith.edu/mathcamp/mathweek.htm>

Cost: \$300

Dates/Length: One week; residential

Criteria: Available to rising sophomore girls

Application Deadline: Application due early May

Focus is on Math and computer science. Girls work with female professors, graduate students and undergraduates to foster their interest in mathematics and expose them to opportunities relating to math. Students attend lectures, do labs, and go on field trips.

North Carolina State University Summer Programs

Contact: <http://www.engr.ncsu.edu/summerprograms/>

Cost: no information available

Dates/Length: June 8-20 or June 22-27 2003

Criteria: All high school students

Application Deadline: Applications available in March 2003

June 22-27 2003: Gives Students an overview of different types of engineering and exposes them to the work that is done by engineers. Students attend lectures and view demonstrations, but also get laboratory and other hands-on experience. June 8 - 20, 2003: Students deal with one engineering specialty, including aerospace, robotics, nuclear engineering, and civil engineering. In each discipline, students will learn the basic principles of their field with the help of professors and university engineering students, and will then apply these principles to a design project.

Northern Kentucky University: Summer Experience for Young Scientists

Contact: <http://www.nku.edu/longa/seys/>

Cost: Students receive \$450 stipend

Dates/Length: Two weeks. Date will be posted on website.

Criteria: Details will be posted on website.

Application Deadline: Details will be posted on website.

Ten students who have demonstrated a strong interest in science and engineering. Students will work with scientists to study geology, forestry, and other sciences that can be used to understand and improve the natural environment in northern Kentucky. Students will develop computer skills that will be useful in solving problems relating to ecology.

Southwest Texas State University: Honors Summer Math Camp

Contact: <http://www.swt.edu/mathworks/student/HSMC/HSMC.html>

Cost: \$1750

Dates/Length: June 15 - July 26, 2003

Criteria: high school students

Application Deadline: April 30, 2003

A math camp for high schoolers who have shown interest in mathematics. Lectures and activities will focus on both challenging and inspiring the participants, and to exposing them to careers and opportunities in mathematics.

University of Florida: Center for Pre-Collegiate Education and Training

Contact: <http://www.cpet.ufl.edu/>

Cost: \$550

Dates/Length: July 20-26, 2003 and July 27 - August 2, 2003

Criteria: Rising tenth grade students

Application Deadline: March 15, 2003

Science Quest will immerse students into many facets of science, both theoretical and experimental. Students will attend lectures, but will also work in labs synthesizing polymers, building robots, and exploring biological sciences.

University of Mississippi: Summer College for High School Students

Contact: http://www.olemiss.edu/depts/umsummer/summer2002/SumCollege_Engineering2002.html

Cost: \$1,000 with scholarships available
Dates/Length: Two, month-long sessions
Criteria: high school students
Application Deadline: early April

Students take a computer programming class, an introductory engineering seminar, and a course in another engineering discipline of their choosing.

University of Virginia: Scholars Program

Contact: <http://www.4starcamps.com/>
Cost: \$4,250 - \$5,995
Dates/Length: July 6 - August 8, 2003
Criteria: Students who have completed 10th, 11th, and 12th grades
Application Deadline: no information available

Students take classes with UVA professors and have the opportunity to earn college credit. Academic classes in the morning, with test prep classes and recreational/personal development activities in the afternoon. Program has optional residential component.

University of Virginia: Senior Program

Contact: <http://www.4starcamps.com/>
Cost: \$2,150 for two week; \$4250 for four week
Dates/Length: Two week and four week sessions.
Criteria: Students entering 10th, 11th, and 12th grades
Application Deadline: no information available

Students take academic classes in chosen disciplines, as well as have the option to take test prep classes. There are weekend excursions planned, and students live on the UVA campus.

University of Virginia: Summer Enrichment Program

Contact: <http://curry.edschool.virginia.edu/centers/enrich/index/>
Cost: \$840 with scholarships available
Dates/Length: 3 Sessions: June 29-July 10, July 23-24, July 27-August 7.
Criteria: Students who have completed 9th and 10th grade.
Application Deadline: Mid February

Students take classes that emphasize critical thinking and/or design. Classes run each morning for three hours, followed by additional exploration time in the afternoons; students live on campus. Typically, the student finishes a design project or develops a final report in his two weeks.

Virginia Tech: Summer Youth Technology Program

Contact: <http://www.conted.vt.edu/sytp/program.htm>
Cost: \$225 (one week) \$375 (two weeks)
Dates/Length: one or two weeks
Criteria: 9th graders
Application Deadline: no information available

The program offers a variety of courses in science and engineering that last for one week. Each program includes a field trip.

Washington and Lee Summer Scholars

Contact: <http://summerscholars.wlu.edu/>

Cost: \$2,200; limited scholarships

Dates/Length: June 29 - July 25 2003

Criteria: Rising high school seniors.

Application Deadline: April 30, 2003

Students can pick one of several curricula that include Brain Sciences, Environmental Science, and Biological Sciences. They take three courses in that discipline over the course of 4 weeks.

California

California State Summer School for Math and Science

Contact: <http://www.ucop.edu/cosmos/>

Cost: \$1,115 (UC Davis) , \$1,110 (UC Irvine), \$1,155 (UC Santa Cruz)

Dates/Length: UC Davis: July 6-Aug3, UC Irvine: July 13 - Aug 9, UC Santa Cruz: June 23 to July 20

Criteria: Students currently enrolled in grades 8-12 are eligible to apply for admission to COSMOS.

To be considered for admission, students must have achieved academic excellence in science and/or mathematics. Such achievement can be documented through the following: Demonstrated excellence in school coursework and grades. Demonstrated innovation with a portfolio of past work. Competition in science fairs or other programs, such as the American High School Mathematics Exam or the Science Olympiad. Completion of special projects under School University partnerships. High performance on standardized tests, such as the Stanford Nine, PSAT, and SAT.

Application Deadline: March 15th, 2003.(UC Davis & Irvine), March 1st (UC Santa Cruz)

The California State Summer School for Mathematics and Science (COSMOS) is an academic four-week residential program for talented and motivated students who are completing grades 8-12. The COSMOS course clusters address topics not traditionally taught in high schools. Course topics include astronomy, computer science, wetlands ecology, ocean science, robotics, neuroscience, cognitive science, game theory, and volcanology.

Caltech: Young Engineering and Science Scholars (YESS) Program

Contact: <http://www.msa.caltech.edu/outreach.html>
yess@caltech.edu

Cost: see website

Dates/Length: see website

Criteria: Minority Outreach

Application Deadline: see website

For the past decade Caltech has offered this program to promising high school students from economically disadvantaged and underrepresented minority backgrounds. It provides an enrichment program to stimulate their interest in the sciences. The program was successful insofar as the percentage of participants who chose to pursue higher education in the sciences was very high.

Destination Science Summer Camps

Contact: <http://www.destinationsscience.org>

Cost: See website in Jan 2003.

Dates/Length: See website in Jan 2003.

Criteria: See website in Jan 2003.

Application Deadline: See website in Jan 2003.

Destination Science Summer Day Camps are exciting, hands-on, learning programs taught by mature, educated, professional teachers. Our camps revolve around central science themes such as Technology, Physics, and Space, the whole time building on all the science disciplines as determined by the National Science Education Standards. Our unique approach to learning emphasizes critical thinking through creative problem solving. 2002 offerings: Extreme Inventionology!, Incredible Tech Zone!, Ultra Rocket Science!

Grouse Ridge Wilderness Backpacking Science Camp

Contact: <http://www.lhs.berkeley.edu/classes/campsres.html#Grouse>

Cost: See website in Jan 2003

Dates/Length: See website in Jan 2003

Criteria: Beginner to Intermediate Backpackers

Application Deadline: See website in Jan 2003

The Grouse Ridge area in the Tahoe National Forest is a favorite with many hikers. Most of the trails here change little in elevation and pass a lake every mile. Granite peaks polished by ancient glaciers, alpine lakes, meadows filled with wildflowers, and magnificent pine forests adorn this 22,000-acre wilderness. It is located north of the junction of Highways 80 and 20. Day one and two are spent at a secluded group camp site where we'll review basic outdoor survival skills. We will experience several hands-on science activities using rock and bird specimens from our museum along with plants and insects we find around camp. Campers will then travel the trails as part of a smaller backpacking group, exploring lakes and streams, and identifying and observing wildlife. Hiking routes have been selected for first-time backpackers as well as for more experienced hikers. Food and transportation to the site are provided.

SEACAMP San Diego

Contact: <http://www.seacamp.com>

Cost: The costs for the 2002 programs were \$675 for SEACAMP I and \$850 for SEACAMP II.

Dates/Length: June through August, 6 days

Criteria: Coeducational, grades 7-12, 56 students

Application Deadline: First come first serve. Download application online.

Marine science education. SEACAMP I is a six-day program designed to introduce students of all levels and abilities to the ocean and the marine life of Southern California. SEACAMP II is for those students who have already attended at least one session of SEACAMP San Diego and are ready for a more challenging and self-guided exposure to marine science. SEACAMP II may be done back-to-back with SEACAMP I for a thirteen-day session.

Stanford University Mathematics Camp

Contact: <http://cartan.Stanford.EDU/sumac/>

Cost: \$2850 for 2002. See website in Jan for 2003 price.

Dates/Length: July 20 through August 16.

Criteria: SUMaC students are selected based on their grades in math courses, their performance on standardized math exams, their teacher recommendations, their reasons for wanting to come to SUMaC as expressed on the personal information form of the SUMaC application, and their performance on the SUMaC admission exam. Particular emphasis is placed on the admission exam, which is a collection of challenging math problems for applicants to work on at home over an extended period. However, success in high school certainly increases ones chances of acceptance. We pay special attention to students who are in academic environments that do not offer the framework to excel in mathematics beyond the usual school curriculum. We typically have two to three times as many applications as there are spaces in the program.

Application Deadline: See website in Jan

To bring mathematically talented and motivated high-school students from across the United States, and from around the world, to Stanford University for four weeks of serious mathematical pursuits. To provide access for these students to advanced topics in mathematics, in a way that is fun and interesting. To lead these students through topics that are of great significance in the historical development of mathematics, that are important to current lines of mathematical research, and that have applications in the sciences. To provide a friendly social environment for interaction between SUMaC participants and Stanford Mathematics Department faculty and students.

Stanford: Education Program in Gifted Youth

Contact: <http://epgy.stanford.edu/summer/>

Cost: see website

Dates/Length: see website

Criteria: see website

Application Deadline: see website

The EPGY Summer Institutes at Stanford University are offering residential programs during the summer of 2002 for students ages 11 through 17. Two and three-week courses in mathematics, physics, computer science and English will be available to gifted and talented students. Check website in Jan 2003 for 2003 information.

Stanford: Quest Scholars Program

Contact: <http://questscholars.stanford.edu/>

Cost: no information available

Dates/Length: 5 week summer program

Criteria: juniors and seniors concerned with the environment

Application Deadline: no information available

The Quest Scholars Program (Quest) is a five-year long educational/ leadership program for exceptionally gifted low-income, at-risk, predominantly minority, high school juniors and seniors who are concerned with the environment. Students from such communities traditionally have not pursued environmental careers, though their neighborhoods are often hardest hit by environmental problems. The participants' involvement with Quest begins with a five-week summer program. By exposing these students to national experts on the environment and assisting them into and through college to top graduate and professional schools, Quest fosters future environmental leaders who could impact their neighborhoods and other disenfranchised communities on local and global levels.

Summer Science Program

Contact: <http://www.summerscience.org>

Cost: Financial aid available, download application.

Dates/Length: June 15 - July 26 & June 29 - August 9.

Criteria: The Summer Science Program will consider applicants who will, in June, have one or two years of school remaining before they are eligible to enter full-time college or university (i.e. current high school sophomores or juniors or the equivalent). Pre-requisites are mathematics through trigonometry and one year of laboratory science (usually chemistry, biology, or physics).

Application Deadline: no information available

The Summer Science Program exposes selected high school students to advanced topics in mathematics, physics, astronomy, and computer science. Unique in the world for its hands-on, practical approach, the Summer Science Program (SSP) challenges its participants to determine the orbit of a minor planet using their own telescope observations, related lab work, and calculations, working in teams of three. In addition to providing a college-level experience, the six-week residential SSP has been a turning point in the academic and personal development of many of its alumni.

UC Berkeley: BFOIT Summer Institute for Future Computer Scientists

Contact: <http://www.bfoit.org/>

Cost: Financial Aid available

Dates/Length: Aug 5 - 16, 2003

Criteria: The ITLP participant must: Be a middle or high school student in the participating region and maintain a GPA of 3.0 and above. Be part of and involved in a social organization that already intends to support student learning and achievement within educational structures. This could be afterschool enrichment or similar programs in the community that the student resides in. If selected, attend and participate in the Summer Technology Training Institute as well as monthly meetings.

Application Deadline: June 30, 2003

BFOIT's leadership training program consists of: One meeting per month hosted by the BFOIT office. The ITLP convenes nationally recognized technology experts, academics, and civic leaders that address salient global and local issues in relation to technology. Through workshops, lectures, seminars, and informal discussions, students learn about vital issues, acquire skills, and develop strategies that can be applied to meet interest and needs in their communities. Two-week Technology Training Summer Institute held in August at UC Berkeley. The institute is designed to train students in the process of inventing technologies, computer programming and they hear from many professionals about options open to them when they enter university, and the work world. Cultural activities such as visits to museums, movies, lectures, and conferences.

UCLA: Summer Discovery

Contact: <http://www.summerfun.com>
discovery@summerfun.com

Cost: \$3399 to \$6200 (2002 Prices)

Dates/Length: 6 weeks. See website for details.

Criteria: grades 9-12, depending on program.

Application Deadline: see website

Five of the Summer Discovery programs offer advanced college credit opportunities for students completing grades 10-12. Courses are offered in a wide range of fields, including the arts, sciences, humanities, mathematics, theater, communications, and the environment.