

ICES — The Institute for Complex Engineered Systems — fosters multidisciplinary research and relationships between Carnegie Mellon University, industry, and government agencies.

Source: <http://www.ices.cmu.edu/see/programs.asp>

Links to Other Outreach Programs

Programs at Carnegie Mellon:

- **Leonard Gelfand Center for Service Learning and Outreach**

<http://www.cmu.edu/gelfand/k12-students-parents/programs.html>

The Gelfand Center web page keeps a page of outreach programs at Carnegie Mellon.

- **Creative Technology Nights for Girls**

<http://women.cs.cmu.edu/technights/>

Creative Technology Nights for Girls is a program focused on exposing middle school girls to creative technologies. Using computer animation, web design, programming, robotics, and interactive media, we hope to engage a future generation of women in technology. The workshops are held on the CMU campus on Mondays from 7:00-8:30pm and will be held in the School of Computer Science, in the new Gates Building. No reservations or RSVPs required; just show up!

- **PROGRESS**

<http://www.heinz.cmu.edu/PROGRESS/>

The PROGRESS program at the Heinz School helps girls learn how to negotiate. They have programs for girls aged 8-12 and also have material for adults.

- **Robotics Academy**

<http://www.education.rec.ri.cmu.edu/>

The Carnegie Mellon National Robotics Engineering Center works mostly with educators in their outreach programs, but may also be able to provide resources for students and their parents. Find out if your school is involved!

- **Summer Academy for Mathematics and Science (SAMS)**

<http://www.cmu.edu/enrollment/summerprogramsfordiversity/sams.html>

SAMS is a 6 week summer academy for students entering 11th or 12th grade. From their web site: "Simply stated, the objective of the Summer Programs for Diversity is to expand the pipeline by enrolling high school students who will grow educationally and personally, and therefore succeed in gaining admission to selective colleges and universities. To that end, we recruit, admit and enroll good students who can become excellent students when given access to educational opportunities at Carnegie Mellon." The program is free to admitted students.

This web site also has links to other summer pre-college programs at Carnegie Mellon. Current pre-college programs include Architecture, Art, Design, Drama, Music, and the Game Academy. The Game Academy is an intensive study of video game design and development.

- **Andrew's Leap**

<http://www.cs.cmu.edu/~leap/>

Andrew's Leap is a summer program (June 20 - August 5, 2011) for high school students (and exceptional middle school students) run by the School of Computer Science. Students discover the exciting and vast possibilities of computer science. Students LEAP ahead ten years in their understanding as they are exposed to the frontiers of computer science research.

- **Green Design Apprenticeship**

<http://www.ce.cmu.edu/GreenDesign/education/primary-public.html>

Through the Allegheny Intermediate Unit (AIU), Green Design offers a Green Design Apprenticeship for local high school students to experience the research challenges of Green Design engineers and researchers. Students meet one day per month over 6 months to learn about current research areas such as life cycle assessment, environmental impacts of energy consumption for electricity generation and transportation, water consumption, and the built environment.

- **Taking College Math and Science Classes:**

It is possible for high school juniors and seniors to take college classes at some of the area colleges through this program. The colleges that participate include Community College of Allegheny County (<http://www.ccac.edu/default.aspx?id=137212>), Carlow University (<http://admissions.carlow.edu/high-school/college-hs.html>), La Roche College (<http://www.laroche.edu/academics/scip.htm>), University of Pittsburgh – Main Campus (<http://www.asundergrad.pitt.edu/audience/high-school.html>), and Penn State University – Greater Allegheny Campus (<http://www.ga.psu.edu/Admissions/dualenrollment.htm>).

Programs at Carlow University:

- **ECO (Environmental Career Opportunities) Camp**

<http://www.carlow.edu/administration/community/women/eco/index.html>

This three-day summer camp is open to all high school girls entering grades 9-12 interested in investigating environmental careers. It focuses on three core themes: Environment, Energy and Sustainability.

- **Summer Science Nation**

<http://www.carlow.edu/administration/community/women/ssn/index.html>

This three-day summer workshop is open to all high school girls entering grades 9-12, who are interested in science and exploring diverse career options in education, research, pharmaceuticals, and the biomedical industry.

- **Prepare to Care**

<http://www.carlow.edu/administration/community/women/p2c/index.html>

This three-day summer workshop is open to all high school students entering grades 9-12, who are interested in exploring the healthcare professions.

Program at Robert Morris University:

- <http://www.rmu.edu/web/cms/academics/sems/outreach/Pages/default.aspx>)

Robert Morris hosts S.T.E.M. outreach programs for students and teachers. For more information, please contact Sarah Kerin at (412) 397-6331 or kerin@rmu.edu.

Programs at the University of Pittsburgh:

- **Pitt Science Outreach**

<http://www.pittscienceoutreach.com/>

The Pitt Science Outreach programs are available for use in the classroom and at community events. In particular, the Mobile Lab programs bring hands-on, real world, laboratory investigations to middles and high school students. On its web site, a calendar lists community events at which the Mobile Lab <http://www.pittscienceoutreach.com/content/pitt-mobile-science-lab>) will be, if you

would like to attend. Also available on the web site is more information if you would like to bring these programs into your school and/or event.

- **Pitt Engineering Career Access Program (PECAP)**

www.engineering.pitt.edu/PECAP

PECAP includes a pre-college and a college component and provides a continuous pipeline for students to move from high school to college. INVESTING NOW and CARE (Critical and Analytical Reasoning Enrichment) make up the PECAP Pre-College Component.

Pittsburgh Tissue Engineering Initiative (PTEI):

- **PTEI Outreach Programs**

<http://www.ptei.org/interior.php?pageID=48>

PTEI and its educational partners offer unique opportunities for high school students to delve into the field of regenerative medicine, improve their laboratory skills, and perform original research. They offer an eight-week program for juniors and seniors, summer internships, and a number of events and programs. There is also the chance for juniors and seniors to act as camp counselors with the PTEI middle school summer camp.

Programs at the Carnegie Science Center:

- **All Carnegie Science Center programs:**

<http://www.carnegiesciencecenter.org/programs/>

- **Programs specifically for girls offered through the Girls, Math & Science Partnership.**

The Girls, Math & Science Partnership's mission is to engage, educate, and embrace girls as architects of change. Working with girls aged 11-17 and their parents, teachers, and mentors, the partnership works to ensure that girls succeed in math and science. Their on-line programs include:

1. **Brain Cake:** <http://www.braincake.org/default.aspx>
2. **Tour Your Future (career exploration programs for girls aged 11-16):**
<http://www.braincake.org/touryourfuture/>

- **[Carnegie Science Awards](http://www.carnegiesciencecenter.org/default.aspx?pageId=363)**

<http://www.carnegiesciencecenter.org/default.aspx?pageId=363>

National Engineers Week includes: Build a Contraption, for students in grades 9-12; Design a City, for students in grades 7-8; Inspire a Future Engineer, a field trip opportunity for all grades.

Program at Magee-Womens Research Institute:

- **Summer Internship Program for High School Students**


<http://mwrif.org/29/high-school-interns>


This program gives high school students who have just completed their junior or senior years the opportunity to participate in research projects in basic science or clinical orientation at the Institute. Students work with investigators for a four-week period and receive a stipend. For more information, please contact Janet Hahalyak, Program Coordinator, at 412-641-6003 or jhahalyak@mwrif.magee.org. Application deadline for 2013 program is March 1, 2013.


- **Girls Adventures in Mathematics, Engineering, and Science**


<http://engineering.illinois.edu/wie/games/>

G.A.M.E.S is an annual week long residency camp at the University of Illinois Champaign-Urbana, designed to give academically talented middle school and high school aged girls an opportunity to explore exciting engineering and scientific fields through demonstrations, classroom presentations, hands-on activities, and contacts with women in these technical fields.

 Office hours are 8:30AM — 5PM Monday through Friday

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