

UCSD StudentTECH 2012

Advanced Technology for Middle and High School Students
Sponsored by the San Diego Supercomputer Center, University of California,
San Diego

Coding Basics using Processing: Learn the Basics of Programming to Create Images, Animations and Interactions

Thursday- Friday, August 16-17, 2012

Class meets at the SDSC Training room from 9:00 a.m. - 3:00 p.m. daily.

Basics Of Computer Programming While Creating Art

Course Overview:

Processing is an open source programming language and environment for people who want to create images, animations, and interactions. Initially developed to serve as a software sketchbook and to teach fundamentals of computer programming within a visual context, Processing also has evolved into a tool for generating finished professional work. Today, there are tens of thousands of students, artists, designers, researchers, and hobbyists who use Processing for learning, prototyping, and production. You are invited to join the revolution as we learn skills for the 21st century.

Processing is a free, open source alternative to proprietary software tools with expensive licenses, making it accessible to schools and individual students. Its open source status encourages the community participation and collaboration that is vital to Processing's growth. Over the course of the class you will learn the basics of object orientated programming in a visual and exciting way, paving the way for start as a computer programmer.

What you can expect from this workshop:

- * A patient knowledgeable instructor who understands that through the use of computer based languages that art can be created.
- * In depth tutorials, guided instruction and support, and the opportunity for self-expression.
- * Increased knowledge of basics of computer programming in a simple and easy way to understand and a chance to share your artwork with others.
- * A solid foundation for the exploration of computer programming and an appreciation for the discipline.

Day-by-Day Schedule:

Thursday, August 16, 2012 – Pixels and Computer Graphics, Processing, and Interaction

Participants will gently be eased in the concepts of computer graphics, lists, and instructions, while learning to create pixels, lines, and shapes to create their own drawings. Color basics and transparency will be discussed as we dive into the language of Processing. Students will practice basic syntax and proper coding techniques for future success. Interaction will be discussed and students will post their first sketches online.

Friday, August 17, 2012 – void setup() and void draw()? What does this all mean and how you can use these tools to create art?

We will cover interaction with the mouse and how variables and randomness can be used to create dazzling effects. Conditionals and Boolean Expressions will be explained as we create a bouncing ball. Students will then apply the knowledge gained from the workshop and post an original piece of artwork online. Finally, we where do we go from here on our journey to become an expert computer programmer?

Presented by Ray Kinne, San Diego Unified School District

Ray Kinne has taught various forms of programming for the last 15 years for San Diego City Schools and SDSU. He sees the computer as a way to create and generate art in a modern society. He invites you to join him.

San Diego Supercomputer Center Summer Workshop 2012

Prerequisites:

- Must be a current middle or high school student in grades 7-10.
- Interested in learning the basics of computer coding in creative and fun manner
- Willingness to work in teams
- Eager to ask questions, share ideas, and help others in the class

Course fee: \$90.00. Registration deadline: June 15, 2012. Space is limited to 19 participants.

If you have any questions regarding this workshop or the application process, please contact Ange Mason via phone at 858 534-5064 or email at amason@ucsd.edu.

Coding Basics using Processing: Learn the Basics of Programming

August 16-17, 2012

Applicant Information:

Name: _____
Last First Middle

Mailing address: _____
Street Address or Post Office Box City/State Zip

Telephone: _____ Email: _____

Date of birth: _____ Age as of June 30, 2012: _____

Gender: ____ Male ____ Female

San Diego County Middle or High School: _____
School name District

Grade completed by June 2012: _____

Email: (optional) _____

Parent or Legal Guardian Information (if applicant is under 18): (Please Print)

Name: _____

Mailing address: _____
Street Address or Post Office Box City/State Zip

Telephone: (Home) _____ (Work) _____

Email: (Please Print) _____

Course fee: \$90.00

Please make your check or money order payable to UC Regents and submit both payment and application in a single envelope to the following address:

Ange Mason
Attn: Student Summer Workshops
San Diego Supercomputer Center
University of California, San Diego
9500 Gilman Drive, Mail Code 0505
La Jolla, CA 92093-0505

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