CAMP LOCATION – NEW LOCATION

The Computer Science Department has moved. We are now part of the College of Engineering and Mines. Camps will be held in the Collaborative Energy Center. We will send out specifics about location, and drop off procedures after registration.

CAMP STAFF

Tom Stokke, teaches a variety of computer science classes at the University of North Dakota. His research interests include computer science education and educational computing. Tom's hobbies include playing, coaching and refereeing volleyball. Tom also enjoys spending time with his wife, Angie, and his three children: Nick, Erik and Elle.
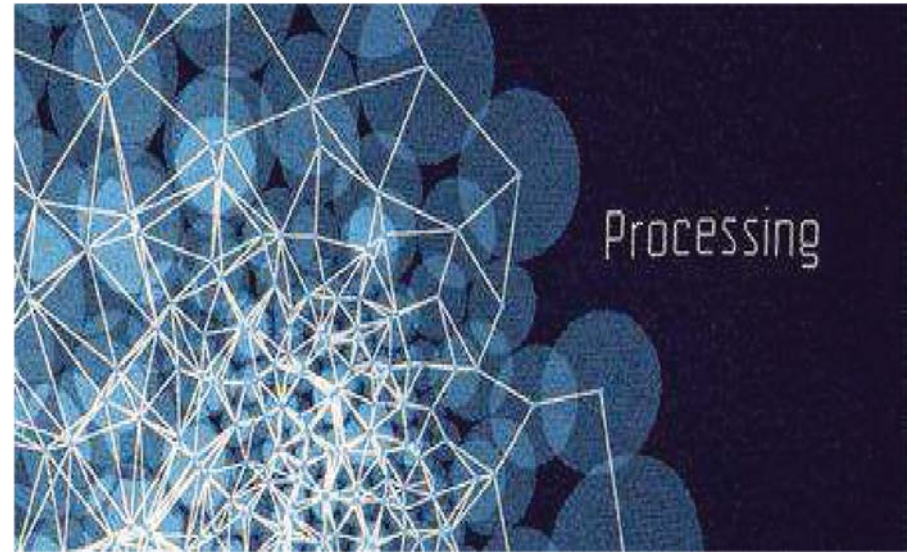
Nancy Nettum is the Department's administrative assistant who handles the purchasing and "behind the scene" tasks.

Camp staff will also include graduate and undergraduate students from the UND Computer Science department. They have been selected because of their interest in computer science education.

Computer Science Department
Upson II Room 366
243 Centennial Drive 9015
Grand Forks, ND 58202-9015
Phone: 701.777.4107

http://camps.cs.und.edu

Processing Introduction to Programming Camp

July 30 – August 3, 2018
9 am - 12 pm

http://camps.cs.und.edu

Processing is an open source programming language and environment used to create images, animations, and interactive programs. Processing is an ideal programming language for an introduction to traditional text-based programming. It was initially created as a tool for non-programmers to create visual and artistic works without needing a mathematics background (although that never hurts!). Processing is highly interactive, allowing the students to get immediate visual feedback from their programs. This encourages the students to experiment and to try things out just to see what happens. Processing also allows for a more systematic approach to programming when it's time to organize and structure those skills learned from "just playing around."
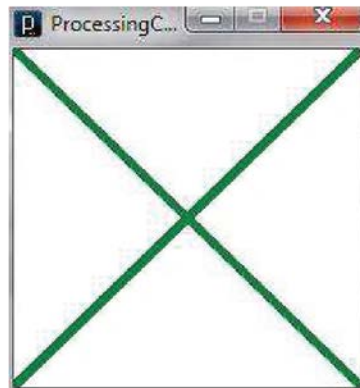
Processing is based upon Java, so skills learned here will be immediately transferable to working in other languages. The Processing program is an environment with a simple editor for typing in the programs, as well as buttons to launch the programs, making it easy to go from programing to testing and back again. Processing is open source, so it is free to download for any current operating system. Processing is also expandable, with an active community of experts and beginners, so there is always a place to share experiences, to look for help, or to offer assistance to others. Processing currently has hundreds of additional libraries available, so as the students programming skills increase, Processing can be extended as well.

As part of the camp, each child will receive numerous tutorial files to use at home.

For more information about the Processing program to go http://www.processing.org.

Processing lets the student start creating images with programs such as:

```
size (200, 200);
background (255);
stroke (0, 128, 0);
strokeWeight (5);
line (0, 0, 199, 199);
line (0, 199, 199, 0);
```


The students will then work toward learning to create images similar to that on the front of this flyer.

At the heart of Processing is a text-based programming language. Almost all of the work done in the camp will be to create graphics images. While we are teaching the students how to access the commands for the graphics, we will also introduce the basic concepts of computer programing. Some of the programming topics that will be addressed include:

- Color and screen orientation
- Decision making and repetition
- Working with numeric data
- Creating interactive programs using the keyboard and mouse

For questions about the camp contact:
Tom Stokke • 701-777-3337
tstokke@cs.und.edu

For questions about registration contact
Nancy Nettum • 701-777-4107
nancy.nettum@engr.und.edu

Cancellation and Substitutions

Cancellations can be made by contacting Nancy Nettum at nancy.nettum@engr.und.edu or Tom Stokke at tstokke@cs.und.edu or call 701-777-4107 (you will need your order number from your confirmation email to complete the process). If the cancellation notice is received by one week **prior** to the start date, you will be refunded your registration fee minus a $35 processing fee. No refunds will be given **AFTER** one week prior to the start date. Substitutions can be accommodated by contacting Nancy Nettum at 701-777-4107.

• No refunds will be made due to behavior issues
• The registration fee will not be pro-rated if the camper leaves early for any reason

We reserve the right to cancel a camp due to low enrollment numbers.

These camps are geared for children ages 9 - 16.

If campers are interested in attending both a morning and afternoon camp in the same week, camp staff will provide supervision for any campers who wish to bring a sack lunch.

Scholarships

A limited number of need-based scholarships are available. Please call Tom Stokke for more information at 701-777-3337 or Nancy Nettum at 701-777-4107.