Computer Science 025
Programming Workshop
Spring 2018

Instructor: Dr. Chris Healy
My office is located in room 200-I in Riley Hall. My office hours are during the following times: 9:30 a.m. – 12:20 p.m. on MWF and 1 – 2:15 p.m. on TR. I am also available at other times by appointment. Please see me if you have any questions during the course. Office phone number 294-2233 and e-mail address chris.healy@furman.edu.

Class Meetings
TR 11:30 – 12:45 Room 203 in Riley Hall
The last class meeting will be held on Thursday, April 26, at 12:00.

Objective
This is a laboratory course. It is intended to be an environment where you can hone your computer programming skill, without the burden of lectures, note taking, written exams, homework and grades. At the beginning of the term, each of you will confer with the instructor and write down your personal goal for this class. For example, maybe your Java is rusty and you want to become proficient in the language. I will then suggest a collection of labs or other exercises for you to work on during the course. As you complete each program, you will add it to your portfolio of work that will record your accomplishment.

Web site: Course material can be found here: http://cs.furman.edu/~chealy/cs025

Textbook: None. Based on your individual objective, you may find it handy to purchase a book about a particular language or how to prepare for technical interviews.

Grade calculation
This is a zero-credit course that is graded on the basis of satistactory (S) or unsatisfactory (U). To earn a mark of Satisfactory, you need to do the following.

* Accumulate no more than seven absences, in accordance with Furman's attendance policy.
* Make appreciable progress toward your goal that you set out at the beginning of the term.
* Demonstrate an ability to write correct computer programs, and to test them thoroughly.
* Submit an organized portfolio of all your work to me by April 26.

Guiding principles for students in Computer Science classes

1. We are here to learn and explore.
   a. Seek discussions with the instructor and classmates about the material to reinforce your understanding and practice communicating ideas.
   b. Have fun. Live in the moment (i.e. don't dwell too much on the difficulties of yesterday or tomorrow). Enjoy the journey and intellectual feast. Be enthusiastic about what you are doing.

2. You can be successful in this class. Every day is an opportunity for an epiphany. Don't let mistakes or setbacks hold you back. After some effort, things can suddenly click in your mind.

3. Learn by doing, not just passively reading, listening or watching.
   Each study period needs to have a clear goal.
   Pay attention to the big picture and the facts that you are collecting.

4. Be organized: Take notes on what you read. Review earlier material as needed. Create a cumulative study outline, and update it each week. Maintain a portfolio of your work.

5. Be patient when solving a homework or lab problem.
   a. There is no need to rush.
      Don't worry if your first attempt at a solution is wrong.
      Read all instructions and be methodical.
      Take time to gather your thoughts.
      Deliberately write out your thought process and plan of attack.
   b. A computer program or other homework assignment may take up to several hours to complete. In programs you need to comment your code as you go, because you will quickly forget what looks obvious right now! Realize that you don't need to finish everything in one sitting.
   c. Break up large problems into small, more manageable pieces.
   d. Don't get bogged down with too many mechanical details. Computing is all about removing tedium from routine tasks.

6. Be curious, and always ask questions.
   a. Find a topic or application that you are enthusiastic about.
   b. Consider alternative solutions to a problem.
   c. When finishing a problem, ask yourself if this problem or its solution lends itself to other problems.

7. Computer science is about logic, structured thinking, information, communication and problem solving. Thus, it has connections to many other fields in the sciences, humanities and social sciences. You will find the analytical techniques useful in your career.