CS414: From Problems to Algorithms to Programs

Spring 2017

| Website: | www.cs.unh.edu/ | ~cs414 |
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| Instructor: Office: Hours: | Betsy Coleman (betsy.coleman@cs.unh.edu) Kingsbury W243 T,R 9:30 to 11 am | |
| Lectures / | T,R 12:40 pm to 2:00 pm, Kingsbury N328 | |
| Lab: | W 10:10 to 11 am, | Kingsbury N218 |

Text:

Fundamentals of Python: From First Programs Through Data Structures, by Lambert (2010)

Course Description:

This course is an introduction to the design and implementation of computer programs. The basic software development process (modeling, algorithm design, programming, testing and debugging) is illustrated through problem examples. Programming techniques are introduced to allow students to implement and evaluate solutions as programs.

Grading: (weights are approximate)

| Labs: | 10% (one per week) |
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| Recitations: | 10% (one per week) |
| Assignments: | 50% (approximately one per week) |
| Midterm: | 15% |
| Exam: | 15% |

Topics:

- 1. Variables and types
- 2. Conditionals and loops
- 3. Strings
- 4. Functions
- 5. Lists
- 6. File Input and Output
- 7. Modules
- 8. Classes and Objects
- 9. Debugging
- 10. Testing

Piazza:

https://piazza.com/unh/spring2017/cs414/home

I have established this course within the <u>Piazza</u> web site. This is an interactive Q&A web site that you can use to ask non-private questions concerning the class, either identified or anonymously. I will try to monitor this site as frequently as I do my e-mail, but it my responses may not always be instantaneous. Continue to send private questions to me via e-mail, but post questions to Piazza when you feel other students may either be able to provide the answer or would benefit from learning the answer. You are encouraged to ask questions when you're struggling to understand a concept, but please refrain from posting entire files. It is fine if you wish to post a few lines of code on which you have a specific question or to illustrate a point, but posting entire files may tempt others to "borrow" more of your work than they are entitled to. If you see a posted question to which you have something to add, feel free to jump into the discussion