Engineering Informatics 1
Introduction

Prof. Dr. Claudia Eckert, Dr. Jonas Pfoh

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You are always welcome to contact us, however please direct homework related questions to your respective tutor group leader.
Syllabus

Week 1  Introduction, Administrative, and PL Taxonomy
Week 2  Programming Language Basics
Week 3 & 4 Intro to C
Week 5 & 6 Intermediate C
Week 7  Debugging
Week 8 & 9 Basic Data Structures
  Christmas Break
  Week 10  Recursion
  Week 11  Sorting
  Week 12  Searching
Week 13 & 14 Object Oriented Programming
If you have not already, register for a tutor section via TUMOnline. There are several sections to choose from. Registration is first come, first serve.

If you have not yet registered for a tutor group, please do so by tomorrow, **Oct. 18, 2013 at 12:00**. This is important as we will be sending out your credentials via email later that afternoon and if you have not registered, you will not get credentials.

These credentials will be sent to your mytum email account, so please check there.
Goals of this Course

The primary goal of this course is to give you an important tool (programming) that will help you in many aspects in the future.

Specifically, you will...

- learn basic programming language fundamentals.
- learn C/C++ programming.
- understand basic data structures (arrays, lists, hash tables, trees).
- understand simple algorithms (searching and sorting).
- understand xkcd comics (http://xkcd.com).
Homework Policy

- We will have weekly graded homework (programming) assignments posted on the website (http://www.sec.in.tum.de/informatik-1-fuer-ingenieure-ws1314/).
- The homework will be reviewed in your tutor groups the week after it is due.
- It is not required that you do the homework, but...
  - your final grade will consist of the better grade between your homework average and the exam grade (assuming you pass the exam).
  - The exam will be of appropriate difficulty that you will not be able to pass if you cannot program in C/C++.
  - You cannot learn how to program without doing.
  - Therefore, do the homework and make your lives easier.
Homework Timing

- We will post the homework on the web site every Sunday.
- The homework will be due the following Sunday at 11:59pm.
- Late homework will not be accepted for a grade as they will be discussed in the following week’s tutor group.
Most of the homework you complete will be programming assignments.

These programs will be written in C (and C++) without an IDE.

Your homework must compile on our server (Debian Linux).
  - Further details will be provided in the first tutor session.

Each assignment will include detailed instructions as to how the input is to be accepted and how the output is to be displayed. It is very important that you pay attention to this or you will lose points. You will be given sample inputs in cases where it makes sense.
For you Windows users...

As I mentioned, your programs must compile on our Linux server, but do not fret...

I have uploaded a very short linux command line cheatsheet to the website that will help get you started. Also, your tutor group leaders, Ms. Grothoff, and I are all happy to help you with any issues.

...but, Dr. Pfoh what icon do I click to make Windows connect to your server or allow me to complete my homework?!??!!!
Well, you have several choices...
PuTTY/PSCP

http://www.chiark.greenend.org.uk/~sgtatham/putty/

A ssh client and scp utility for Windows.

Pros

▶ Very lightweight
▶ No installation required

Cons

▶ Requires all work to be done on server (or constant copying of files)
http://www.cygwin.com/

A collection of tools which provide a Linux look and feel environment for Windows.

**Pros**
- Provides all of the GNU/Linux utilities you will need to complete your assignments on Windows (including ssh/scp to connect to our server).

**Cons**
- Requires some installation (though it is straightforward).
Virtualization (e.g., VirtualBox)

https://www.virtualbox.org/

Virtualization allows you to run an operating system within your existing operating system.

Pros

▶ This solution gives you the full Linux experience.

Cons

▶ Requires considerable installation and configuration.
▶ Hardware requirements must be taken into account.