CIS 210: Introduction to Computer Science

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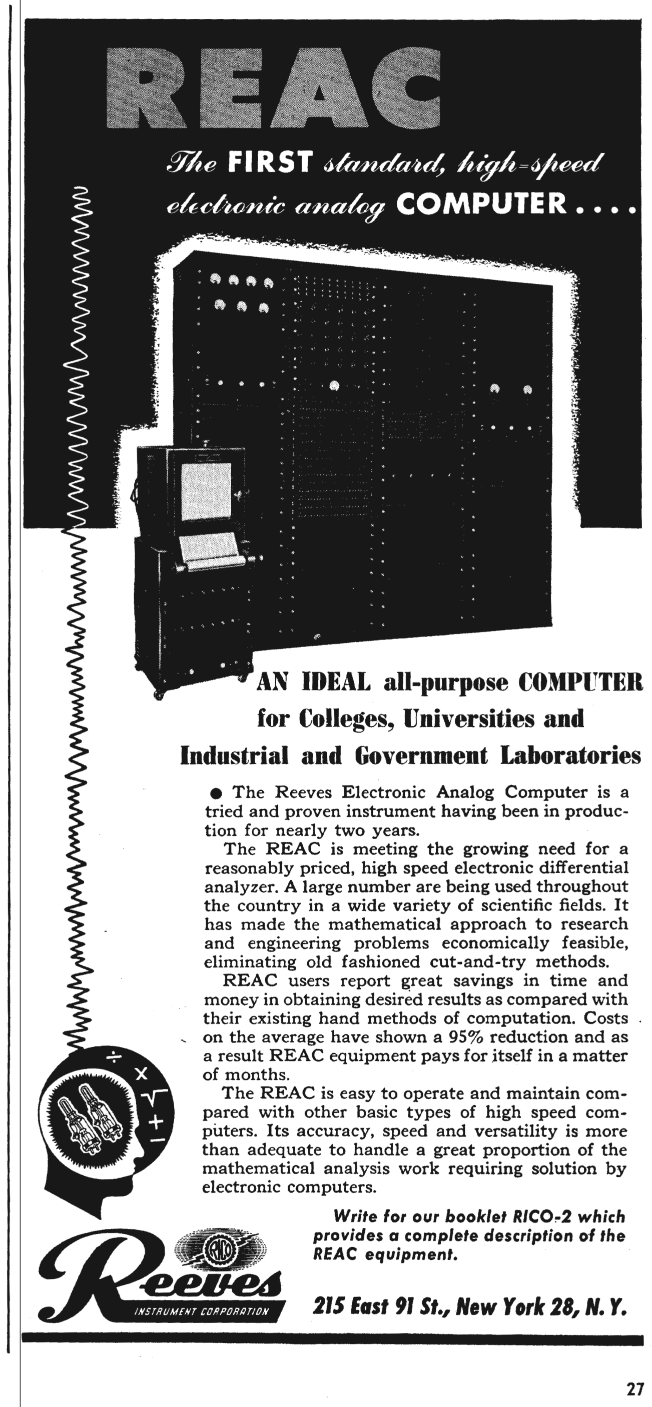

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The REAC is easy to operate and maintain compared with other basic types of high speed computers. Its accuracy, speed and versatility is more than adequate to handle a great proportion of the mathematical analysis work requiring solution by electronic computers.

Write for our booklet RICO-2 which provides a complete description of the REAC equipment.

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Obtaining Course Info

Read the class web page:

http://www.cs.uoregon.edu/Classes/14W/cis210/

Follow the "references" link to editor and Python installation instructions.

Enroll in Piazza group:

http://piazza.com/uoregon/winter2014/cis210

Announcements, discussion, advice, and useful material will appear there. Communicate with us and other students on the Q&A page.

Keep current! It is your responsibility.

Why come to class?

Slides will (mostly) be available after class

But ...

- Lecture is more than reading the slides, and I don't do all the talking.

- Observation: *People who skip lecture do poorly on assignments and exams*

Live coding

If you have a laptop, bring it to class

We will do some exercises together: discuss, then code and test

I will ask for volunteers. Be brave.

Textbook

Introduction to Computing Using Python: An Application Development Focus

by Ljubomir Perkovic

Read assigned chapters *before* lecture

come to class with questions

Experiment!

try examples from the book, and try variations

Class Language

We are an international university. We have a variety of first languages.

Our language in common is *International English*

which is not the same as American English

It's ok to ask me to repeat. I may ask you to repeat.

Introduction to Computer Science

Programming is an *important part* of computer science

Important

It makes everything else possible.

But just a part

There is much more to computer science.

"CS may be more than programming, but it is not less than programming."

J. Stearn, letter in CACM 47(9), Sep 2004.

Programming and CS
Why the CS major starts with programming

Learning to program is just part of CS

But programmability (universality) is the essence

You must understand programming to understand CS

Python is (just) a reasonable example to start with

Q: What is Programming?

A: Solving problems

The computer is a tool.

- A carpenter must know how to use a hammer, but knowing how to use a hammer doesn't make you a carpenter.

A programming language is also a tool.

- You will learn Python. You will also learn to program. *Not the same thing!*

Programming is mostly about logical analysis and problem solving

Goals for CIS 210

Learn computer science concepts

Problem solving with computation

General programming skills

- includes designing programs to be understood and modified by humans
- includes testing, debugging

Expressing programs in the Python language

- but the programming concepts apply to other languages

Labs

- Lab attendance is mandatory
  - It counts toward your grade!
  - Turn in work or “passphrase” as evidence of attendance
- Labs cover material not in lecture
- It’s your best chance to understand how to solve the homework problems

Getting Help

Labs are excellent opportunities to get help

Instructor and GTFs also hold office hours. We want to see you there!

- But if you skip the lecture, don't ask me to repeat it in office hours. I won't do that.

We also respond to questions on Piazza:

http://piazza.com/uoregon/winter2014/cis210

and choose Q&A tab

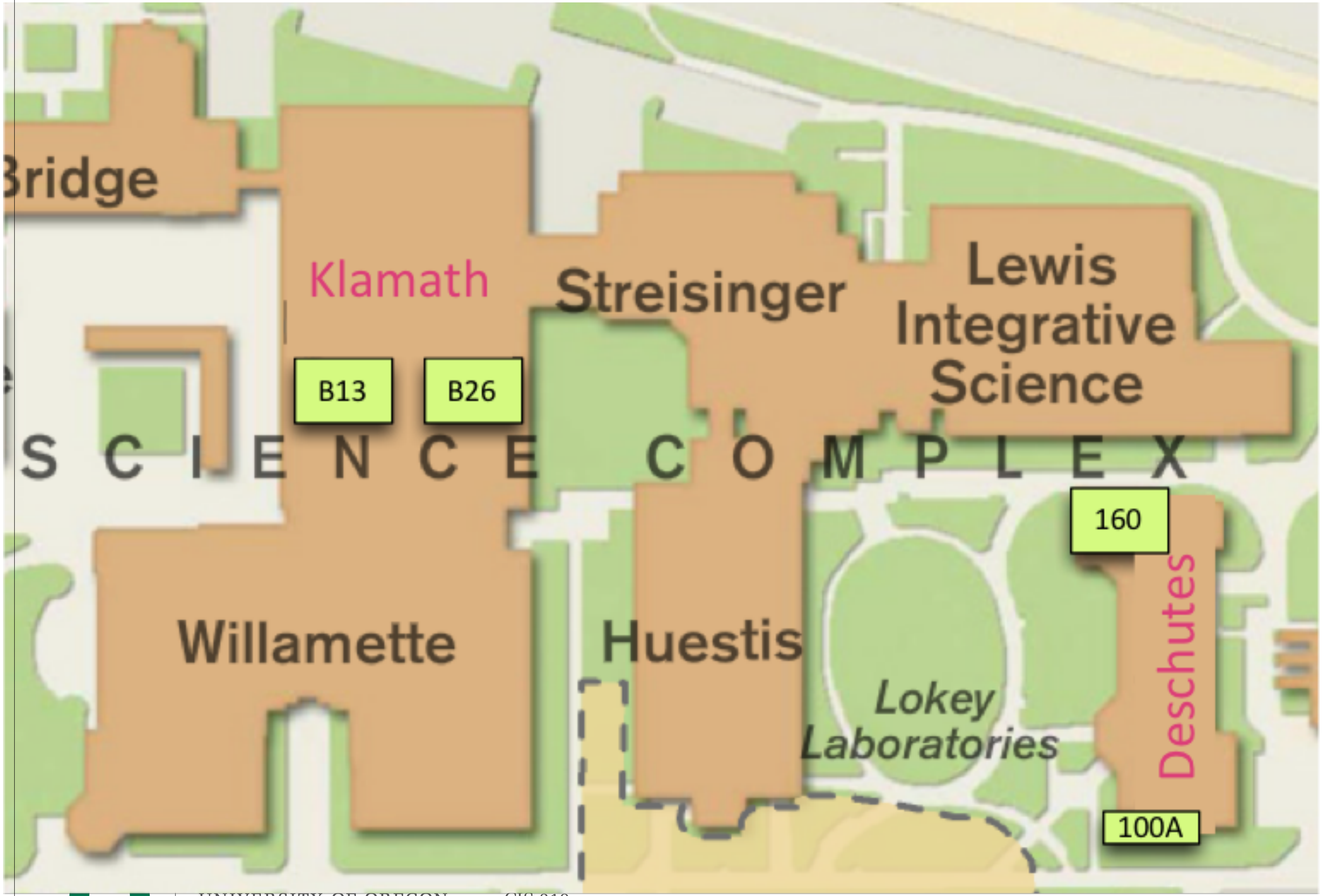
We try to answer quickly, usually within 24 hours (often much faster).

Don't wait to the last minute

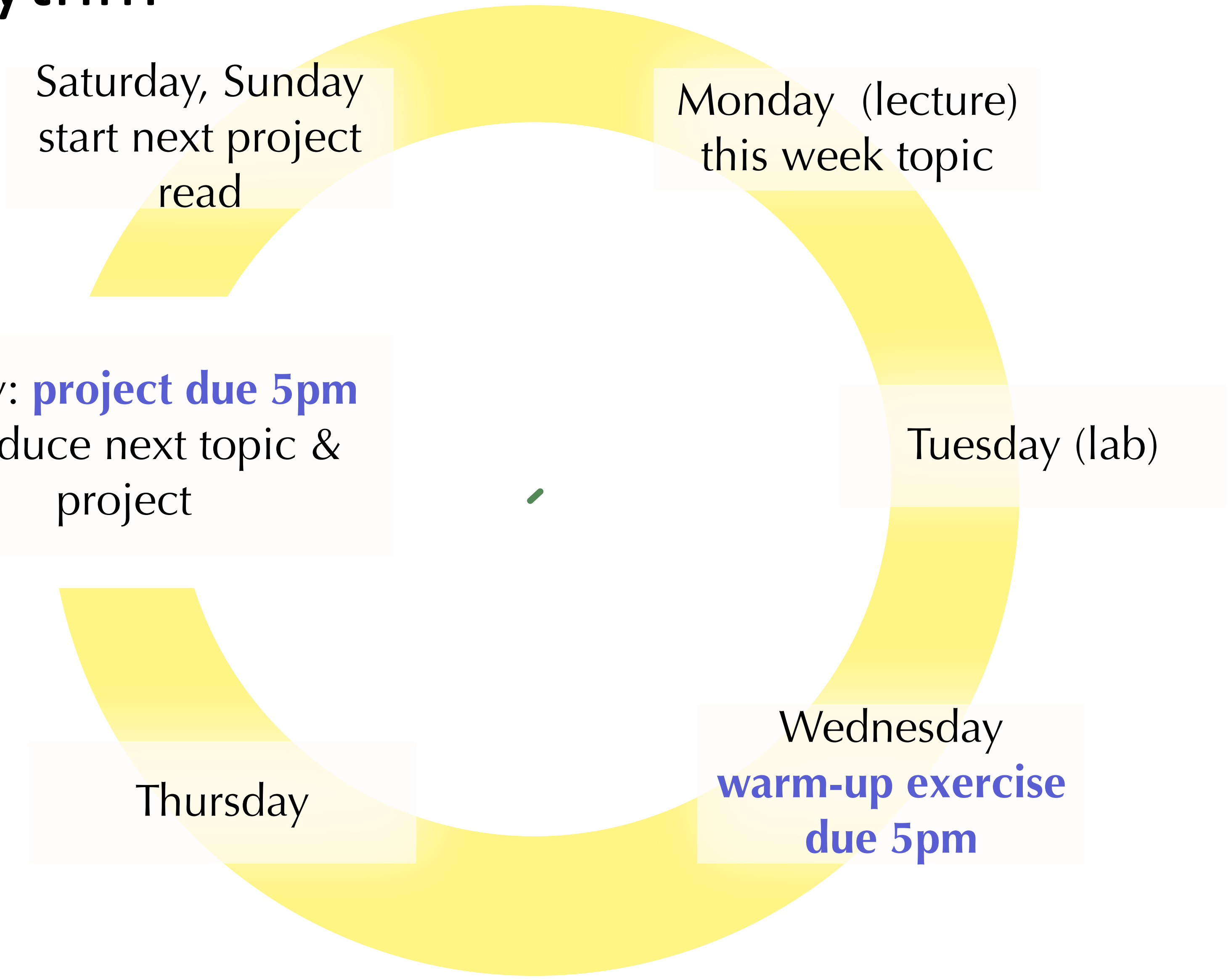
If the assignment is due in two days, and you are completely lost, we probably can't help you much.

Office hours will be posted in Piazza; also try Google calendar subscription

	Mon	Tue	Wed	Thu	Fri
8	*Math 231*	*Math 231*	*Math 231*		Lab *Brent*
8:30					
9		Lab *Brent*	Office hours *Brent*	Office hours *Brent*	
9:30					
10	*Math 231*	Lab *Brent*	*Math 231*		*Math 231*
10:30					
11	210 Lecture	Office hours *Brent*	210 Lecture		210 Lecture
11:30					
12	Lab *Anna*		Office hours *Anna*		Office hours *Anna*
12:30					
1	Lab *Anna*				
1:30					
2	*Math 231*	*Math 231*	*Math 231*		*Math 231*
2:30				*210 staff meeting*	
3					
3:30	Office hours *Michal*	Faculty meetings		Office hours *Kirsten*	Office hours *Michal*
4					
4:30					


Bridge
Klamath
Streisinger
Lewis Integrative Science
B13
B26
SCIENCE COMPLEX
160
Willamette
Huestis
Lokey Laboratories
Deschutes
100A

Weekly Rhythm



Labs Fri, Mon, Tue

A break in our rhythm ... but we'll cope

Friday treated as first lab of next week

(missing lab first week ... try to make it up with office hours)

We'll make adjustments if this isn't working well

Pair Programming

Pair programming is encouraged on most projects

- Pair programming is done with two people working together at one computer: One driver and one observer. **Trade roles often.**
  - Pair programming does *not* mean letting someone else do your assignment. You must understand every bit of it.
- Switch up: Maximum three projects with each partner.
- Each partner turns in program listing both authors

Always document contributions of all authors

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Tell me how this works for you, and what you think.

Other Collaboration

DO discuss the problems

- Discuss general approaches to solving them. Learn from each other.
- If you rely on ideas from someone else, or somewhere else (e.g., a web site), document it in your solution.

DON'T copy or plagiarize

- Write every line of program code yourself.
- We *can* tell. **We *do* enforce UO academic honesty policy.**

First Assignments

[No Wednesday warmup this week]

First projects are posted.

Due Friday 5pm. Submit files on Blackboard.

To do right away

Go to lab this week

- Practice turning in Python program
- If you are in Friday lab, we'll try to help in office hours.

Install Python 3.3 (see instructions)

Start on homework

Bookmark Piazza (and enroll if needed)