COURSE SUMMARY

CS 010

Design and Implementation of Solutions to Computational Problems

Prof. Donald J. Patterson

DESIGN AND IMPLEMENTATION OF SOLUTIONS TO COMPUTATIONAL PROBLEMS

A man came upon a construction site where three people were working. He asked the first, "What are you doing?" and the man replied: "I am laying bricks." He asked the second, "What are you doing?" and the man replied: "I am building a wall." As he approached the third, he heard him humming a tune as he worked, and asked, "What are you doing?" The man stood, looked up at the sky, and smiled, "I am building a cathedral!"
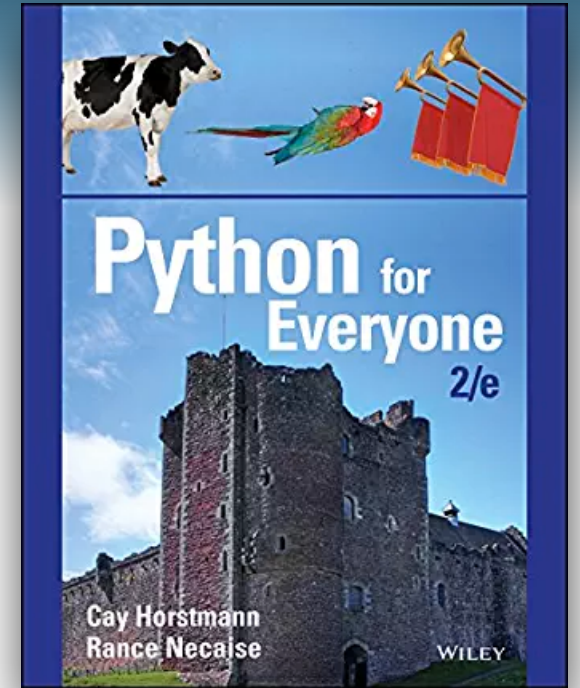
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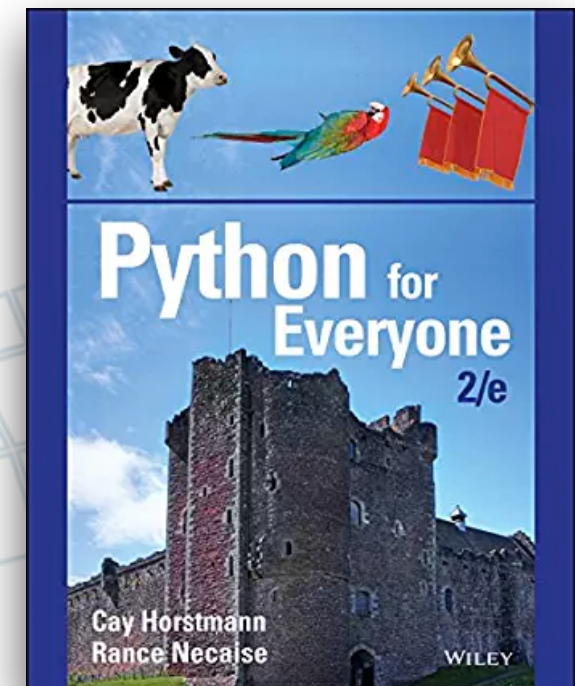## IT'S BEEN A PACKED 15 WEEKS!

- We did most of our work from

  - Python for Everyone

    - Ch 1 Introduction

    - Ch 2 Programming with Numbers and Strings

    - Ch 3 Decisions

    - Ch 4 Loops

    - Ch 5 Functions

    - Ch 6 Lists

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  - Python for Everyone

    - Ch 7 Files and Exceptions

    - Ch 8 Sets and Dictionaries

    - Ch 9 Objects and Classes

    - Ch 10 Inheritance

    - Ch 11 Recursion

COURSE SUMMARY

IT'S BEEN A PACKED 15 WEEKS!

- We learned some tools

  - python

  - PyCharm

  - modules

    - ezgraphics

    - Numpy

    - Scipy

    - Tweepy

    - Scrapy

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- We tried some new things
  - Poll Everywhere
  - Pair Programming
  - Dice rolling
  - My new pointer!

COURSE SUMMARY

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- We looked at some technology trends

  - Looking for NSA wire tapping

  - Is math discovered or invented?

  - undersea cable maps

  - Social Fabric Fitness Wearables

  - The Social Web of Things

  - Curious Displays/Disney Swarms

  - High-end poker cheating

  - Computational Thermoforming

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- We looked at some technology trends

  - TensorFlow

  - Google Deep Dreaming

  - Google Quick Draw

COURSE SUMMARY

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- Some fun stuff
  - Centrifuge Brain Project
  - HyperReality
  - Made a maze game in class
  - Optical Illusion Video

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- Guests
  - Westmont Downtown promo

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- Faith and Learning

  - In-class prayers

  - Artifacts of computational systems that reflect a bigger picture about how our creations flow from being image bearers

  - Connections between how our approach to work can be motivated by a relationship to Christ

COURSE SUMMARY

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- Field Trips
  - Clark Trailer

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- Assignments

  - 39 participation grades

  - 12 Online Homework Sets

  - 12 Programming assignments

  - 3 Exams

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- As an instructor I learned
  - More about python
    - Especially about the tools like PyCharm, Anaconda, and the modules
  - That I like Murchison Gym 4
  - What motivates you all as learners
  - About what it is like to approach all of this for the first time

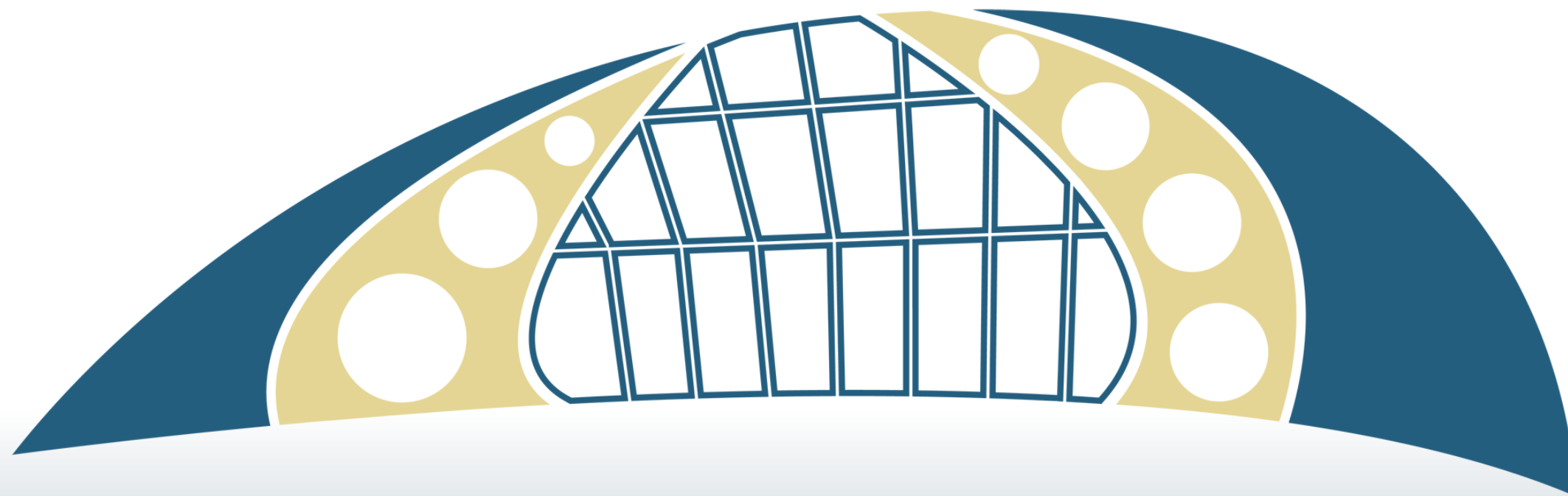IT'S BEEN A PACKED 15 WEEKS!

CONGRATULATIONS!
YOU ARE ALMOST DONE

- It is an honor and privilege to
  - be able to teach
  - be able to teach a subject that I love
  - in this place
  - to you

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WESTMONT INSPIRED
COMPUTING LAB