

ICS 32: Programming with Software Libraries

Lecturer Mark S Baldwin, PhD

TA Lucas Chang

TA Harsh Misra

TA Monisha Loganathan

Agenda for Today

1. Course Background
2. Course Overview
3. Assignment Overview
4. Course Staff and Format

ICS 31 – ICS 32 – ICS 33

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What you've learned so far...

Information and Operation

- Inputs, outputs, and managing intermediate results
- Structure and organization of the program

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What you've learned so far...

Data Types

- Program data has a type...examples?
- Understand the rules for working with different types

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What you've learned so far...

Functions

- How/when to write a function
- How to use function parameters

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What you've learned so far...

Data Structures

- Structures for organizing and manipulating data
- Lists, sets, tuples, dictionaries, and the differences between each.

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What you've learned so far...

Control Structures

- Conditional statements...?
- Loops...example?

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What you've learned so far...

Abstraction

- ?

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What you've learned so far...

Abstraction

- Hide complexity to simplify your code
- Support code reuse

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What you will learn next...

Software Libraries

- A pre-existing codebase designed to solve a particular type of problem
- Designed to be used in your code to reduce programming work

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What you will learn next...

Software Libraries

- Trade-offs of using a library?

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What you will learn next...

Python Standard Library

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What you will learn next...

Python Standard Library

- Calendaring
- File Management
- Compression
- Networking and Web
- Drawing
- Sounds

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What you will learn next...

Building Real Programs

- Creating new objects with classes
- Handling errors
- Assembling classes and functions into programs
- Testing the functions, classes, and programs that you build

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What you will learn next...

Final Thoughts

The assignments in this course are going to be challenging, and quite different from what you have experienced in previous courses.

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What you will learn next...

Final Thoughts

Building real programs is complex and often not resolved through straightforward solutions.

If you are stuck, reach out early and often!

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Assignment Overview

A0: Getting Started with Python

Due: Mon Jan. 11 by 11:59pm

2 pts

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Assignment Overview

A1: File Explorer

Due: Mon Jan. 25 by 11:59pm

10 pts

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Assignment Overview

A2: Chatting with Friends

Due: Mon Feb. 8 by 11:59pm

12 pts

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Assignment Overview

A3: Extending the Platform

Due: Mon Feb. 22 by 11:59pm

12 pts

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1. Course Background
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Assignment Overview

A4: Encrypting the Platform

Due: Mon Mar. 1 by 11:59pm

12 pts

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Assignment Overview

A5: A Graphical User Interface

Due: Fri Mar. 12 by 11:59pm

12 pts

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Project Overview

Paired project – partner up
(required)!

Project Plan

Due: Fri Feb. 5th by 11:59pm

5 pts

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Agenda for Today

1. Course Background
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Project Overview

Final Project

Due: Wed Mar. 17 by 11:59pm

(finals week)

25 pts

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Course Participation

Attend 5 out of 8 live quiz participation – 5 pts

Zulip activity – 5 pts

Extra Credit:

- Attend all 8 – 2 pts

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Lecturer Mark S Baldwin, PhD

- Ph.D. Informatics,
University of California, Irvine 2020
- Master of Human-Computer Interaction,
Carnegie Mellon University 2013
- B.A. Computing,
DePaul University 2012
- Joined UCI Informatics in 2020
- Industry work:
Principal/Founder, Baldwin Technology Consulting,
2002-2012
Manager/Web Developer, BBDS Advertising, 1998-2002

TA Lucas Chang

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TA Harsh Misra

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Reader Monisha Loganathan

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Tutors

ICS 32 Lab B1	Cattien Ngo	cattienn@uci.edu
ICS 32 Lab B2	Connor Chen	connoc2@uci.edu
ICS 32 Lab B3	Jason Yim	yimj3@uci.edu
ICS 32 Lab B4	Zhesen Tang	zhesent@uci.edu

Final Notes

- Canvas: Syllabus, zoom, lecture videos, and assignment submission
- Course Website: <https://ics32.markbaldw.in/>
 - Weekly notes
 - Links to slides, quiz results, lecture videos
 - Assignment overviews
- Socrative.com
 - Weekly quizzes
 - Live on zoom every Tuesday
 - Graded on participation, not scores
 - Let's give it a try!