

# Python Programming Workshop

Train-the-Trainer for Introductory Programming

Dominique Gerald M Cimafranca  
Ateneo de Davao University

| blog: [villageidiotsavant.com](http://villageidiotsavant.com)  
| email: [dominique@cimafranca.com](mailto:dominique@cimafranca.com)

This work is licensed under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 Philippines License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0/ph/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.



# Objectives of the Workshop

To introduce you to the Python programming language

To devise new ways to teach introductory programming

To develop a roadmap for software engineering

To learn from each other

To build community

# Workshop Plan

Day 1	Day 2	Day 3
Workshop Preliminaries	Python Data Structures	TurtleWorld
Introducing Python	Python Libraries	Major Projects
Python Exercises	Python Exercises	Breakout Session 3
Moodle Tutorial	Python Modules	Programming Paradigms
A Sample Syllabus	Debugging	Other Python Capabilities
Breakout Session 1	Breakout Session 2	Wrapup Forum

# Stuff we won't spend much time on

- Writing GUI applications
- Web applications
- Database applications
- Object oriented development

...otherwise known as...

“I can do **X** in VB, so why can't I in Python?”

(...but we talk about these on  
the last day of the workshop)

# Questions?

# Breakout Session 1

- What do you expect to cover in introductory programming?
- What skills do you expect of your students after introductory programming?
- What difficulties have your students had in introductory programming?
- Knowing what you know of Python so far, how would you structure the introductory programming?

# Breakout Session 2

- Develop exercises for each competency area
  - Translate existing exercises to Python
  - Write new exercise
  - Describe the solution
- Python vs. C vs. Java vs. PHP
  - What problems are more difficult in Python?
  - What problems become trivial in Python?

# Competency Areas

- Data types
- Variables
- Expressions
- String processing
- Functions
- Loops
- Boolean logic
- Conditionals
- Modules
- Libraries
- Recursion
- Stacks
- Scope
- Data Structures
- File Input / Output
- Debugging



# Breakout Session 3

- Develop specifications for a major project
  - Describe the solution
  - What competency areas does the project test?
  - Assess the difficulty
- How do you make programming fun (again)?

# Wrapup Forum

- Your impressions about Python
- Your assessment of Python for introductory programming
- How can we help you? How can you help us?
- Building and maintaining community
- Other questions?