



Tekzone Cameroun.

Visit: tek.zone

Build Your Own Game - Syllabus - EN

Instructor

Romarie Tsopnang

Phone

+237696307380

Email

rtsopnang@tek.zone

Office Location

Carrefour Happy Sport,
Makepe

Office Hours

9:00-15:00

Saturday-Sunday

Course Overview

This course is a Video Game course using Python Language.

Gain the basics of Python and use PyGame to create fast-paced video games with great graphics and sounds. **Build Your Own Game Course** teaches you how to use Python and PyGame on your computer. Whether you use **Windows, macOS, Linux**, or a **Raspberry Pi** you can unleash the power of Python and PyGame to create great looking games. Included in the course are complete code listings and explanations for “Race”, «Bricks, » «Snake» and «Invaders»– three fully-working games. These allow you to get started making your own great games. Modify them or build your own exciting titles. **Build Your Own Game Course** Builds games using game projects as templates like Race, Bricks, Snake, and Invaders Work with user defined functions, inheritance, composition, and aggregation. Add sound to your games Implement finite state machines.

Course Learning outcomes

At the end of this course, the student will know how to:

- Basics of Python
- Employ it for game development and Design your game
- Build games using game projects as templates like Bricks, Snake, and Invaders
- Have Fun Playing Your Own Game
- Share Your Game with Friends for Them to Have Fun with It



Tekzone Cameroun.

Visit: tek.zone

Prerequisites

- There is no prerequisite to this course
- But a problem solver mindset is an advantage

Course Structure

This is a One (01) weeks course. Divided into Four (04) sections. More details about the content of each Session in the following part:

Session #1 - Introduction to Python and Video Game Tools

1. At the end of this Section 1, the learner will be able to:
2. Install and use python Interpreter
3. Know Difference between Python 2 and Python 3.
4. Use Variables
5. Use Containers: Lists, Dictionaries and Tuples
6. Use IDLE, Python native development environment
7. Have an Overview of Game Tools
8. Install PyGame

Session #2 - Basic Introduction to PyGame

At the end of this Section 2, the learner will be able to:

1. Import the PyGame Framework
2. Initialize PyGame
3. Have an Overview of Images and Surfaces
4. Create image
5. Load image
6. Draw image
7. Master Screen coordinates and resolution
8. Have an Overview on Sprite Sheets.

Session #3 - Design Your Game

At the end of this Section 3, the learner will be able to:

1. Gather requirements: Brainstorming
2. Make Functional Specification
3. Design the program
4. Code the Game
5. Test and Fix bugs in the Game
6. Make an example Game: **Race**

Section #4 - Video Game Projects

At the end of Section 4, the learner will build a final training project and will participate to a competition:

1. Choose and Design objects that will be used in the Game
2. Brainstorm projects ideas
3. Build a final Training Project.
4. Test and evaluate the project
5. Final Training competition.

Certificate of Completion.

Online Resources

During the training, you'll have to access some online resource hosted on <https://www.tek.zone/academy>

Course Materials

- Laptop Computer
- Internet connection (DSL, LAN, or cable connection)
- Access to Web site: <https://www.tek.zone>



Tekzone Cameroun.

Visit: tek.zone

There are some additional software resources needed to follow this course:

- PYTHON INTERPRETER
- PyGame Library
- Images and Sounds for your First video Game

Course Schedule

Section	Day & time	Subjects
Section 1	Saturday: 9:00 – 12:00	Introduction to Python and Video Game Tools Workshop: Setup your environment
Section 2	Saturday: 12:30 – 14:00	Basics introduction to PyGame Workshop: Make Your First Program with PyGame
Section 3	Sunday: 9:00 – 12:00	Design Your Game Project: Brick
Section 4	Sunday: 12:30 – 14:00	Game Project FINAL TRAINING COMPETITION



Tekzone Cameroun.

Visit: tek.zone

Course Policy

Attend Class

Students are expected to attend all class sessions as listed on the course calendar.

- Student will attend to each class session 15 minutes before the beginning of the course.
- In case of unavailability, student must get in touch with the instructor the day before

Participate

The student should participate actively to the class, ask questions if needed and answer question given by the instructor. He (she) should also follow the course on our e-learning platform answer the quizzes and participate to the discussion forum.

Build Rapport

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that they can help you find a solution.

Commit to Integrity

As a student in this course you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and integrity in your behavior in and out of the classroom.

Sincerely Romaric Tsopnang.