



Intro to Python Programming

Welcome to a learning adventure where you journey into the wizard like world of programming with the powerful, popular, playful Python programming Language!

You and your teacher, with a little help from AI will guide you in learning the simple scripts that make up the basic tools used to build complex programs and applications.

We have designed a learning environment to support you in building a strong foundation in programming that will help you in every language you will learn.



PYTHON CREATOR:
Guido van Rossum

TROUPES



In honor of Guido, you will be assigned as a member of a python troupe. You will be brainstorming and collaborating together to find all the funny little details of basic Python scripting..



FUN FACT:

The Python programming language was created by Guido van Rossum in the Netherlands. He did not name the language after a snake! He named after his favorite British comedy troupe Monty Python. He wanted a name that was short, unique, and slightly mysterious. And just for fun, you may run into a few silly references in this course.



SIMPLE SCRIPTS

What you will master:

- ★ Creating, modifying, and following a plan for your learning.
- ★ Collaborating as a troupe and asking questions analyzing *basic python topics, focusing on individual understanding.
- ★ Explaining the “why, how, and when” behind python concepts using clear, jargon free language
- ★ Writing simple python scripts on demand.



You and your troupe will use “The Intermittently Useful Basic Python Companion” (IUBPC), a custom chatbot learning assistant. Chat GPT will be a critical part of your competent mastery

CHANGE—GROW—TRANSFORM



To be a spark for change in the world you will need to:

- ❖ Attend every class. In-person learning and assessments are integral to your progress
- ❖ Use the IUBPC, the Dippers, and CompetentSee chats to accelerate your learning of simple python scripting
- ❖ Collaborate in your troupe to drive major components of your product while also honing your individual competencies.

CONTINUE TO GROW

- Experience professionalisms such as intent, sharing, and troubleshooting.
- Implement these concepts proficiently in code.
- Apply generative AI in a manner that is industry-appropriate, transforming ideas into impactful digital solutions that drive positive change.



TRANSFORMATION!

The purpose of your journey is to develop your skills and professionalism through technological mastery—growing and changing in ways that translate into tangible, positive impacts across computing, agriculture, biology, physical and social sciences, and beyond. With every line of code and every collaborative effort, you’re not just learning; you’re evolving to make a significant difference in the world.



SIMPLE SCRIPTS

Your Commitment:

➤ Class Time (2 hrs/week):

Collaborate with your troupe, innovate on your product, and engage in dynamic in-class experiences.

➤ Personal Time (4+ hrs/week):

Dedicate time to self-study, enhance your competencies, and seek mentorship to deepen your understanding.



ESSENTIAL SUPPLIES



You will need to get a **paid** subscription to ChatGPT (*It's your textbook*)

Optional Text Resources:

<https://pyflo.net/>

<https://allendowney.github.io/ThinkPython/>

*Basic Python Topics



Basic Python Bits:

- Variables
- Data Types
- Expressions
- Strings
- Comments



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- Basic Input
- File Input
- Output
- Formatting f-strings



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- Conditionals
- While Loops
- Lists
- Methods
- For Loops

You will be showing mastery in each python tool listed

Learning & Competency Tools - Links

Basic PyBits

Learn: [IUBPC](#)

Practice: [Coach](#)

Claim: [Dipper](#)

[CompetentSee](#)

I/O Div.

Learn: [IUBPC](#)

Practice: [Coach](#)

Claim: [Dipper](#)

[CompetentSee](#)

LLLL Ltd.

Learn: [IUBPC](#)

Practice: [Coach](#)

Claim: [Dipper](#)

[CompetentSee](#)





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Assessing your Transformation

Assessment results are determined by your product contributions, troupe interactions, utilization of the Learning Model, and competency progress:

Still Working on It

An indication that further effort is needed in mastering the competencies and producing meaningful contributions to the troupe's product. Remediation or retaking the course will be required to fully prepare for future courses and jobs. This maps to a D grade.

Considerable

A strong grasp and effective application of all the course material demonstrated by meaningful contributions to the troupe's product and all competencies being completed. Your efforts set the stage for your further growth and productivity. This maps to a B grade.

Outstanding

Masterful understanding, application, and integration of course material; significant original thinking; contributions that not only advance your troupe's product but also reflect a profound personal transformation. Your efforts set the stage for positive global impact. This maps to an A grade.

Note: Your assessment reflects your evolution—from daily contributions and interactions to your final competency assessments. The last competency consultation with your instructor is entered as the grade for this class.

Claiming Competency

Your journey to mastery extends beyond the classroom—competencies are forged through proactive learning and collaborative mentorship. By consulting with your instructor and claiming competencies during class sessions, you drive your personal transformation. Achieving overall competency means reaching the "Considerable" level by successfully mastering all the *basic python topics and contributing significantly to your troupe's product.

Prepare for each meeting by reflecting on your progress, reviewing grade descriptions, and engaging in thoughtful self-assessment—this is your opportunity for personalized feedback that steers your transformation toward excellence.



Goal Discussions

Instructor Meetings

Week 1: Meet with the instructor to identify your goals for the class and ask questions about the course.

Weeks 5 & 9: Review your progress, identify where you stand, and set ambitious targets for the rest of the semester.

Week 13: Finalize your grade for the course based on your demonstration of competencies and your contributions to your troupe's product.



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SIMPLE SCRIPTS



EMBRACE OPEN, COLLABORATIVE LEARNING



Cultivate a spirit of mutual support and shared growth within your troupe. Contribute innovative designs and ideas, write code that makes an impact, and attend every troupe meeting to harness the collective energy. Dive deep using the learning companion (IUBPC), Dippers, and CompetentSee GPTs until you confidently master applying the competencies you need to be a productive contributor in your troupe and in the world.



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