Sky Get Into Tech (GIT) Evening Programme

Sky Get into Tech (GIT) Evening Programme

Duration: 15 weeks
Client Relationship Director: Sam Gilkes
Lead Instructor: Victoria Lloyd

Programme Overview

This programme is for non-technical candidates with the desire to become Software Developers. This programme is delivered over 15 weeks. There is an evening setup event that candidates should attend prior to course commencement. The first week is full-time immersion training followed by 14 weeks of two x 3 hour evening sessions. One session each week is a Tutor session where attendees review their homework with their instructor.

The other session is a Learning Session where new topics are introduced. These sessions are delivered from 6-9pm.

Pre-course Learning 8 hours

Cloud Literacy (3 hours)
https://app.qa.com/learning-paths/cloud-literacy-956/

Agile Fundamentals (2 hours)
https://app.qa.com/learning-paths/agile-fundamentals-online-learning-900/

Site Reliability Engineering (SRE) Foundation (3 hours)
https://app.qa.com/learning-paths/site-reliability-engineering-sre-foundation-1759/

Programme Outline

Module 1: Program Welcome - Introduction to Sky

Module 2: Intro to Programming
What is a programme and what is programming? Programmer activities
How do Programmers work? Agile and scrum
Essential Programmer traits - Pair programming

Module 3: Internet Technologies
What is the internet?
Clients, servers and HTTP
The domain name system
HTTP request methods and requests and responses
Web architecture and Python
Applications versus APIs

Module 4: HTML
An intro to HTML
Headings, links and images and file paths
HTML tables
Structural elements, lists and entities

Module 5: CSS
An intro to CSS
CSS selectors
Applying styles
Inheritance and specificity
Responsive web design with bootstrap

Module 6: Intro to JavaScript

What can JavaScript do?

Where to put JavaScript

JavaScript syntax

Module 7: Version Control with Git
What is version control?
Create a repository
Simple Git commands
Stage changes & Commit changes
Working with remote repositories

Module 8: Intro to Python 3 What is
Python 3?
Python scripts & Python help
Anatomy of a Python script
Modules
Functions and built-ins
An introduction to PyCharm

Module 9: Python Variables
Variable names
Type specific methods
Operators and type
Augmented assignments
Python types
Switching types

Week 2

Evening 1:   Tutor Session Homework review

Evening 2:   Module 10: Conditionals

Module 10: Conditionals
Python conditionals What is truth?
Boolean and logical operators
Chained comparisons
Sequence and collection tests
Object types
While loops
Loop control statements
For loops enumerate
Counting 'for' loops
Conditional expressions
Unconditional flow control

Week 3

Evening 1:   Tutor Session Homework review

Evening 2:   Module 11: String Handling

Module 11: String Handling Python
3 strings

The print function
String concatenation 'Quotes'
String methods String tests
String formatting
Other string formatting aids
Slicing a string
String methods - split and join

Week 4

Evening 1:   Tutor Session Homework review

Evening 2:   Module 12: Collections & Module 13: File Handling

Module 12: Collections Tuples
Lists
Tuple and list slicing Manipulating
lists, Sets
Dictionaries, Manipulating dictionaries

Module 13: File Handling

Reading from files Writing to files

Week 5

Evening 1:   Tutor Session Homework review

Evening 2:   Module 14: Functions

Module 14: Functions
Python functions
Function parameters
Variadic functions
Assigning default values to parameters
Named (keyword) parameters
Enforcing named parameters
Returning objects from a function
Variables in functions
Lamdba functions

Week 6

Evening 1:   Tutor Session Homework review

Evening 2:   Module 15: Modules and Packages & Module 16: OOP

Module 15: Modules and Packages
What are modules and packages?
Multiple source files
How does Python find a module?
Importing a module

Module 16: Object Orientation Classes
and OOP
Object-Oriented terminology
Object-Oriented Programming
Using objects
Defining classes & Defining methods
Constructing an object
Special methods

Operator overloading
Properties
Properties and decorators
Class methods
Inheritance & terminology

Week 7

Evening 1:   Tutor Session Homework review

Evening 2:   Module 16: OOP Continued & Module 17: Exception Handling

Module 17: Exception Handling Exception
handling
Exception syntax
Multiple exceptions
Exception arguments
The finally block
Order of execution
The Python exception hierarchy
Raising Exceptions

Week 8

Evening 1:   Tutor Session Homework review

Evening 2:   Module 18: MySQL Part 1

Module 18: MySQL: Part 1
An introduction to databases
Relational databases
NoSQL databases
Introduction to MySQL
The Data Definition Language (DDL)
Creating databases
Create table syntax

Week 9

Evening 1:   Tutor Session Homework review

Evening 2:   Module 19: MySQL Part 2

Module 19: MySQL: Part 2
Data Control Language (DCL)
Data Manipulation Language (DML) Referential integrity
Drop table/database
Writing SELECT queries

Week 10

Evening 1: Tutor Session Homework review

Evening 2: Module 20: Flask Part 1

Module 20: Flask Part 1

What is Flask,

HTTP Methods

Routes

Testing routes with Postman

Week 11

Evening 1: Tutor Session Homework review

Evening 2: Module 21: Flask Part 2

Module 21: Flask Part 2
Jinja 2 Templates
HTML forms
Database queries and Python

Week 12

Evening 1: Tutor Session Homework review
Evening 2: Flask Part 2 continued & Introduction to the Final Project

Week 13

Evening 1: Tutor Session Project review
Evening 2: Final Project

Week 14

Evening 1: Tutor Session Project review
Evening 2: Mock Assessment Centre

Week 15

Evening 1: Tutor Session Project review
Evening 2: Final Project Showcase Closing Event

In Programme Digital Learning 15 hours

Python for Beginners (6 Hours)
https://app.qa.com/learning-paths/python-for-beginners-637/

JavaScript for Beginners (7 Hours)
https://app.qa.com/learning-paths/javascript-for-beginners-3823/

Solving Real-world Problems with Regular Expressions in Python (2 hours)
https://app.qa.com/learning-paths/solving-real-world-problems-with-regular-expressions-in-python-2079/

Post Programme Digital Learning 11 hours

Foundation Certificate in Cyber Security (11 Hours)
https://app.qa.com/learning-paths/qa-foundation-certificate-in-cyber-security-846/