SKY Technology Graduate Programme (STGP) with Cyber Stream

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Course code: ZSKYSTGP

Duration: 25 days/5 weeks

Lead Instructor: Victoria Lloyd

Client Relationship Director: Sam Gilkes

Programme Overview

The STGP programme is a 5-week Bootcamp that prepares graduates for roles in technology at Sky. The Bootcamp lays the foundations that the graduates will carry through into their rotations across four areas of the business.

Graduates will understand Agile, Business Analysis, Programming and Cyber fundamentals in order to progress on to roles in Sky such as *Product Owner, Scrum Master, Technical Analyst, Project Manager, Data Analyst or Software Developer.*

Programme Pre-course Reading via Cloud Academy

Python for Beginners, average duration 3 hours https://app.qa.com/learning-paths/python-for-beginners-637/

Cyber Security Fundamentals Pathway, average duration 2 hours https://app.qa.com/learning-paths/cyber-security-fundamentals-pathway-1805/

Additional work for Cyber Stream (14 hours)

Developing Web Applications with HTML and CSS (10 hours)

Developing Web Applications for HTML/CSS

Learning Git First-Hand (4 hours)

Learning Git First-Hand (qa.com)

Programme Outline

Week 1

Agile Fundamentals, Agile Project Management, Product Owner & Design Thinking

Agile Fundamentals

- What is agile, benefits of using agile, values and principals of agile?
- What is Scrum, Scrum events, roles, artefacts and values?
- What is Kanban & how do Scrum and Kanban differ?
- Agile teams using a combination of agile frameworks and methods?
- Agile teams estimating effectively?

Agile Project Management

- Understand project management, project lifecycles & planning, roles & responsibilities within projects and the operating environment
- Project management planning & project scope management
- Project risk and issue management in the context of a project
- Quality in the context of a project
- Project context and communication within environment
- Understand leadership and teamwork within a project

Agile Product Owner

- Understand the key characteristics of value-based product ownership
- Create a delivery roadmap that illustrates planned value and identifies measurable outcomes
- Categorise stakeholders and represent their conflicting needs using tools such as personas, storyboarding and story maps

Design Thinking

- Understand and explain Design Thinking and its benefits to peers and stakeholders
- Apply Design Thinking techniques to support the innovation of products/services
- Demonstrate a Design Thinking mindset in approaching tasks that require "out the box thinking"
- Use Design Thinking as a means to solve complex problems
- Use Design Thinking as a tool to creatively improve products/processes

Week 2

Practical Business Analysis

- The Scope for Business Change
- Project Initiation
- Requirements Engineering
- Business Process Modelling
- Process Improvement
- The User Journey
- Understanding Business Data
- How Data Changes
- Interviewing Stakeholders
- Focus on People
- Reaching Agreement
- Effective Workshops

Week 3

Web Development Fundamentals & Version Control Stream

- Introduction to Programming
- Web technologies: HTTP requests, responses, and methods
- Build structured HTML pages with text, links, images, tables, and forms
- Use Cascading Style Sheets (CSS) to style HTML pages
- Understand inline, internal and external style sheets
- Introduction to JavaScript
- Use Bootstrap for Responsive Web Design techniques to make pages display well on all devices they may be viewed on
- Use version control (GIT and GitHub) to work collaboratively on code
- Understand git tracking, commits, logs and branches
- Create local and remote repositories
- Use git commands to pull and push between repositories
- Understand merge conflicts and how to resolve conflicts

Week 3

Cyber Stream – Foundation Certificate in Cyber Security

- Understand the threats faced by modern networks, systems, and application platforms.
- Network fundamentals - explaining basic networking concepts including network services, physical connections, topologies and architecture, and cloud connectivity.
- Understand network security concepts and network attacks to harden networks against threats.
- Understand routing technologies and networking devices; ethernet solutions and wireless technologies including Bluetooth, WAN, LAN, MAN, PAN, and BAN
- Understand the difference between the OSI 7-layer model and the TCP/IP Model
- Understand the threats, attacks and vulnerabilities from newer custom devices that must be mitigated, such as IoT and embedded devices, DDoS attacks and social engineering attacks based on current events.
- Understand organisational risk management and compliance with regulations, such as PCI-DSS, SOX, HIPAA, GDPR, FISMA, GLBA and CCPA.
- Introduction to the risks and security challenges with AI adoption within organisations.
- Understand organisational security assessment through protective monitoring and incident response procedures, such as basic threat detection, risk mitigation techniques, security controls and basic digital forensics.
- Understand cloud computing concept and architecture.
- Understand the physical security components connected to the Internet threat they pose to your organisation. Including RFID, IOT, smart phones.
- Insider threat, the passive and active threat and how to overcome them.
- Understand physical, technical, and procedural security controls.
- Perimeter defences are not enough. Understand de-perimeterisation and how to implement layered security approach using defence in depth.
- Understand the techniques used to detect, prevent, and respond to threats.
- Identify areas of testing, audit and review and system development
- Open-source security tools for active and passive defence techniques
- Understand the difference between separation of systems and segregation of duties and how that is implemented and validated.
- Discover and analyse 'high risk' weakness within systems.
- Understand cryptography and its applications in a digital world.
- Analyse, attribute, and predict the threats and create an active defence posture.

Week 4

Python Programming & Flask

Python Programming

- Introduction to Python 3
- Python variables
- Flow control

- String handling
- Collections
- Regular expressions
- File Handling
- Functions
- Class and OOP
- What is Flask?
- HTTP methods
- Routes
- Testing routes with Postman
- Jinja 2 Templates

Week 5

NIST Cyber Security Professionals (NSCP) Foundation Certification, Present with Impact & Project

NIST Cyber Security Professionals (NSCP) Foundation

- Today's Digital Economy
- Understanding Cyber Risks
- The NIST Cybersecurity Framework Fundamentals
- Core Functions, Categories & Subcategories
- Implementation Tiers
- Developing Framework Profiles
- Cybersecurity Improvement

Presentation Skills

- Use simple techniques to cope with nerves
- Engage and adapt to different audiences
- Use powerful visual aids
- Achieve your aim
- Tackle difficult questions
- Plan, prepare and present with impact a subject of graduates' own choosing

Project
- Completion and Presentation of Sky Graduate Project to business