



IN PARTNERSHIP WITH



Software Engineering Programme Curriculum

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Software Engineering Programme Curriculum

Foundations		
Sprint 1		
Git & Command Line Editors	Introduction to Bash	C – First Statements
C – Pointers	C – Recursion	C – Static Library
C – Memory Allocation	C – Preprocessor	C – Variadic Functions
C – Bit Manipulation	C – File I/O	Singly Linked Lists
Create your own Printf	Create your own Shell	
Sprint 2		
Python – First Statements	Python – Import & Modules	Python – Data Structures
Python – Exceptions	Python – Classes	Python – Inheritance
Python – File I/O	Python – JSON Serialization/ Deserialization	HTML/CSS Introduction
SQL – Basic Queries	SQL – Join Queries	C – Dynamic Libraries
C – Makefiles	Doubly Linked Lists	Stack and Queues
Hash Tables	Sorting Algorithms	Binary Trees
Bash – Scripting	Unix Processes and Signals	Regex
Network Introduction		
Sprint 3		
Python – Object-Relational Mapping	Python – Web Framework	Python – RESTful API
Python – Web Scraping	Javascript – First Statements	Javascript – Objects
Javascript – Scopes and Closures	Javascript – Web Scraping	Search Algorithms
SSH	SSL Certificate	Web Server

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Sprint 3		
Load balancer	Firewall	MySQL Primary-replica
Server Monitoring	Code Deployment	Postmortem
Webstack Debugging	Portfolio Project	
Specialization 1 Front-End		
Sprint 4		
ES6 Introduction/Promise	ES6 Classes/Data Manipulation	TypeScript
HTML / CSS Advanced	Developer Tools	Responsive Design
Webpack	React Introduction/Props	React Component
React Inline-Styling	React State/Immutable	React Redux - Action Creator/Normalizr
React Redux - Reducer Selector	React Redux - Connector/Provider	
	or	
Specialization 2 Back-End		
Sprint 4		
ES6 Introduction/Promise	ES6 Classes/Data Manipulation	TypeScript
Python	Async	MySQL Advanced
NoSQL Introduction	Redis Introduction	API Pagination
Caching Algorithms	Unit & Integration Tests	i18n
Personal Data	User Authentications	Node JS Introduction
Queuing System	GraphQL API	Async File API