



NEW YORK CITY COLLEGE OF TECHNOLOGY SUMMER BRIDGE PROGRAM IN COMPUTING

AUGUST 8-12, 2016

AGENDA

DAY 1 Monday, August 8, 2016 Computer Science without Code	9:30-10:30 – Introduction and Registration <i>OpenLab, Trinket.io, App Inventor 2, Code.org, Twitter, Tablet assignment</i> 10:30-11:30 – What is an algorithm? <i>Paper coding, Introduction to Sorting, Max and Search Algorithms</i> 11:30-12:30 – The Secret Rules of Modern Living: Algorithms 12:30-1:30 - Break 1:30-2:30 – Programming Game <i>RoboDerby Express</i> 2:30-3:30 - Recursion <i>The Fibonacci Sequence, n!, Quicksort and Mergesort</i>
DAY 2 Tuesday, August 9, 2016 Introduction to Programming	9:30-11:30 – Block Coding <i>Etch-A-Sketch, Ball Bounce, Voting, Push</i> 11:30-12:30 – Introduction to Python <i>Calculator, Variable Types, Resources</i> 12:30-1:30 - Break 1:30-3:30 – Python Programming <i>If/Else Statements, Loops, Functions, Importing, Sorting and Max Implementation</i>
DAY 3 Wednesday, August 10, 2016 Mathematics in Computer Science	9:30-10:30 – Integer Representations (base 2) 10:30-11:30 – Modular Arithmetic 11:30-12:30 – Cryptography and Hashing 12:30-1:30 - Break 1:30-2:30 – Graph Theory (trees) 2:30-3:30 – Recursion Revisited
DAY 4 Thursday, August 11, 2016 Applications and the Bigger Picture	9:30-10:30 – Data Analysis with Python <i>Pin Codes, Birthdays</i> 10:30-11:30 – Twitter with Python 11:30-12:30 – App Brainstorm Session 12:30-1:30 - Break 1:30-3:00 - App Development and Research 3:00-3:30 – Concluding Thoughts <i>What is Code? Article</i>
DAY 5 Friday, August 12, 2016 Skills for Success	9:00-10:00 - Study Skills by Helen Frank 10:00 - 10:30 - College Success by Cindy Bink 10:30 - 11:00 - Computer Science Program and S-STEM by Urmi Ghosh-Dastidar 11:00-11:30 - Computer Engineering Technology by Xiaohai Li 11:30 - 12:00 - ASAP by Emeline Betances

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